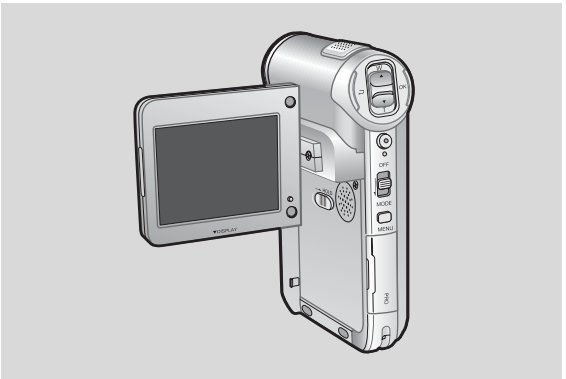
Digital Camcorder

VP-X105L/X110L



AF **Auto Focus**
CCD **Charge Coupled Device**
LCD **Liquid Crystal Display**

Owner's Instruction Book

Before operating the unit, please read this Instruction Book thoroughly, and retain it for future reference.

SAMSUNG
ELECTRONICS

CE This product meets the intent of Directive 89/336 CEE, 73/23 CEE, 93/68 CEE.

ENGLISH

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Notices and Safety Precautions

Precautions on the CAM Care

- ✣ Please note the following precautions for use:
- ✣ Please keep this device in a safe place. The device contains a lens that can be damaged by shock. Keep away from the reach of the children.

- ■ Do not place your device in a wet place. Moisture and water may cause the device to malfunction.
- ■ To avoid electric shock, do not touch your device or power cable with wet hands.
- ■ Do not use the flash close to another's eyes. The flash emits a strong light that may cause damage similar to direct sunlight on one's eyesight. Particular care should be observed if photographing infants, when the flash should be no less than 3 feet from your subject.
- ■ If the device is not working properly, please consult your nearest dealer or authorized Samsung service facility. Disassembling the device yourself may cause irrecoverable damage which will be difficult to repair.
- ■ Clean the device with a dry, soft cloth. Use a soft cloth moistened with a mild detergent solution for removing stains. Do not use any type of solvent, especially benzene, as they may seriously damage the finish.
- ■ Keep your device away from rain and saltwater. After using, clean the device. Saltwater may cause the parts to corrode.

Notices and Safety Precautions

Notes Regarding COPYRIGHT

- Television programmes, movie video tapes, DVD titles, films and other programme materials may be copyrighted. Unauthorized recording of copyrighted materials may infringe on the rights of the Copyright owners and is contrary to copyright laws.
- All the trade names and registered trademarks mentioned in this manual or other documentation provided with your Samsung product are trademarks or registered trademarks of their respective holders.

Notes Regarding Moisture Condensation

1. **A sudden rise in atmospheric temperature may cause condensation to form inside the CAM.**

For Example:

- Entering or leaving a heated place on a cold day might cause condensation inside the product.
- To prevent condensation, place the product in a carrying case or a plastic bag before exposing it to a sudden change of temperature.

Notes Regarding the CAM

1. **Do not leave the CAM exposed to high temperature (above 60°C or 140°F).**
   For example, in a parked closed car in summer or exposed to direct sunlight.
2. **Do not let the CAM get wet.**
   Keep the CAM away from rain, salt water, or any other form of moisture.
   The CAM will be damaged if immersed in water or subjected to high levels of moisture.

Notices and Safety Precautions

Notes Regarding the Battery Pack

- It is recommended to use original battery pack that is available at SAMSUNG service centre.
- Make sure the battery pack is fully charged before starting to record.
- To preserve battery power, keep the CAM turned off when you are not operating it.
- If your device is left in STBY mode without being operated for more than 5 minutes, it will automatically turn itself off to protect against unnecessary battery discharge.
- Make sure that the battery pack is attached firmly in place.
- The new battery pack provided with the product is not charged.
  Before using the battery pack, you need to fully charge it.
- Do not drop the battery pack. Dropping the battery pack may damage it.
- Fully discharging a Lithium Polymer battery damages the internal cells. The battery pack may be prone to leakage when fully discharged.
- To avoid damage to the battery pack, make sure to remove the battery when no charge remains.
- Clean the terminal to remove foreign substance before inserting the battery pack.

✳ When the battery reaches the end of its life, please contact your local dealer.
Batteries must be disposed of as chemical waste.
✳ Be careful not to drop the battery pack when you release it from the CAM.

Note Regarding a Trademark

- The logos regarding DivX, DivX Licensed are the trademark of DivX, Network, Inc and can be used after contracting license.

Notices and Safety Precautions

Note Regarding the Lens

- Do not film with the camera lens pointing directly at the sun.
  Direct sunlight can damage the CCD (Charge Coupled Device, the imaging sensor).

Notes Regarding the LCD Display

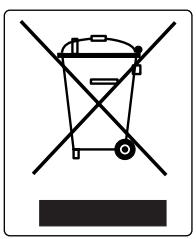
1. The LCD monitor has been manufactured using the high precision technology. However, there may be tiny dots (red, blue or green in colour) that appear on the LCD monitor. These dots are normal and do not affect the recorded picture in any way.
2. When you use the LCD monitor under direct sunlight or outdoors, may be difficult to see the picture clearly.
3. Direct sunlight can damage the LCD monitor.

Precautions Regarding Service

- Do not attempt to service the CAM yourself.
- Opening or removing covers may expose you to dangerous voltage or other hazards.
- Refer all servicing to qualified service personnel.

Precautions Regarding Replacement Parts

- When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer and having the same characteristics as the original part.
- Unauthorized substitutions may result in fire, electric shock or other hazards.



Correct Disposal of This Product
(Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

Getting to Know Your CAM

Features

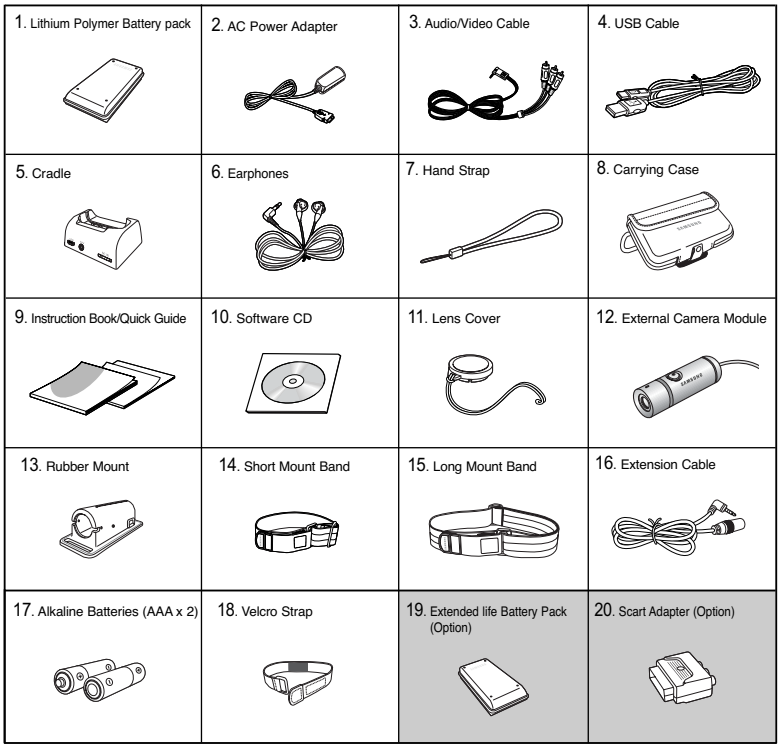
- **Integrated Digital CAM/DSC operation**
  An integrated digital imaging device that easily converts between a Digital CAM and a Digital Still Camera with comfortable and easy recording.
- **High Resolution Image Quality (Digital Still Camera)**
  Employing 800K CCD Pixel, a maximum resolution of 800x600 is available.
- **100x Digital Zoom**
  Allows the user to magnify an image up to 100x its original size.
- **Colourful TFT LCD**
  A high-resolution(210K) colourful TFT LCD gives you clean, sharp images as well as the ability to review your recorded files immediately.
- **Electronic Image Stabilizer (EIS)**
  With the CAM, you can reduce unstable images by avoiding natural shaking movements.
- **Various Digital Effects**
  The DSE (Digital Special Effects) allows you to give the film a special look by adding various special effects.
- **USB Interface for Data Transfer**
  You can transfer still images and video files or any other files to a PC using the USB interface.
- **PC Cam for multi-entertaining**
  You can use this the CAM as a PC camera for video chatting, video conference and other PC camera applications.
- **Voice Record / Playback with vast memory**
  You can record voice and store it in the internal memory, Memory Stick and Memory Stick Pro(Option) and play back the recorded voice.
- **Plus Advantage, MP3**
  With the CAM, you can play back MP3 files stored in the internal memory, Memory Stick and Memory Stick Pro(Option). Enjoy your favourite songs with the MP3 files with the CAM.
- **A Sports CAM equipped with External Camera Module**
  Equipped with External Camera Module, enjoying sports activity can be directly recorded when connected to the main Miniket unit.
- **Weatherproof (External Camera Module only)**
  The External Camera Module is weatherproof according to IP42 standard.
  IP-Protection Level
  4- The External Camera is protected against contact from solid objects over 1mm in diameter.
  2- The External Camera is protected against water sprayed from a vertical position above the centre of camera top (Power LED facing up) at 15 degree angles.

Getting to Know Your CAM

Accessories Supplied with the CAM

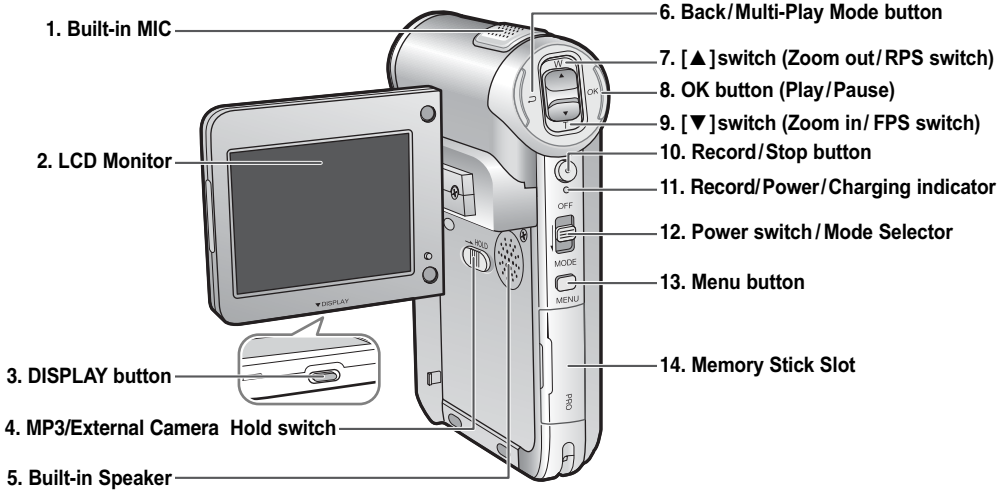
✤ Make sure that the following basic accessories are supplied with your CAM.

1. Lithium Polymer Battery pack
2. AC Power Adapter
3. Audio/Video Cable
4. USB Cable
5. Cradle
6. Earphones
7. Hand Strap
8. Carrying Case
9. Instruction Book/Quick Guide
10. Software CD
11. Lens Cover
12. External Camera Module
13. Rubber Mount
14. Short Mount Band
15. Long Mount Band
16. Extension Cable
17. Alkaline Batteries (AAA x 2)
18. Velcro Strap
19. Extended life Battery Pack (Option)
20. Scart Adapter (Option)



Name of Each Part

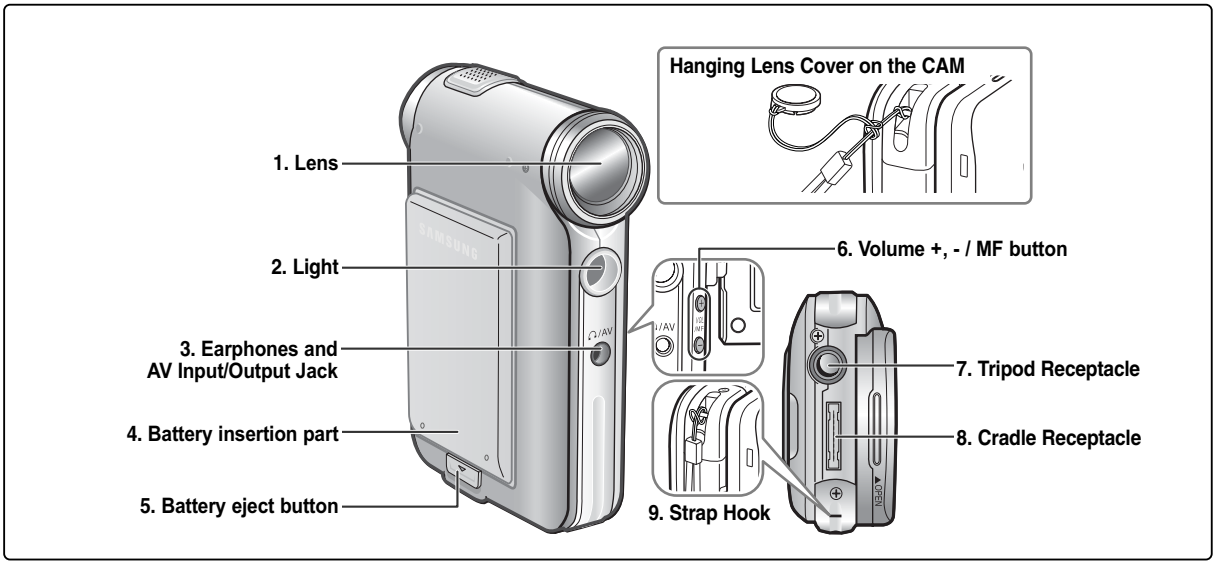
Rear & Left View



1	Built-in MIC
2	LCD Monitor
3	DISPLAY button
4	MP3/External Camera Hold switch
5	Built-in Speaker
6	Back/Multi-Play Mode button
7	[▲]switch (Zoom out/RPS switch)
8	OK button (Play/Pause)
9	[▼]switch (Zoom in/FPS switch)
10	Record/Stop button
11	Record/Power/Charging indicator
12	Power switch/Mode Selector
13	Menu button
14	Memory Stick Slot

Name of Each Part

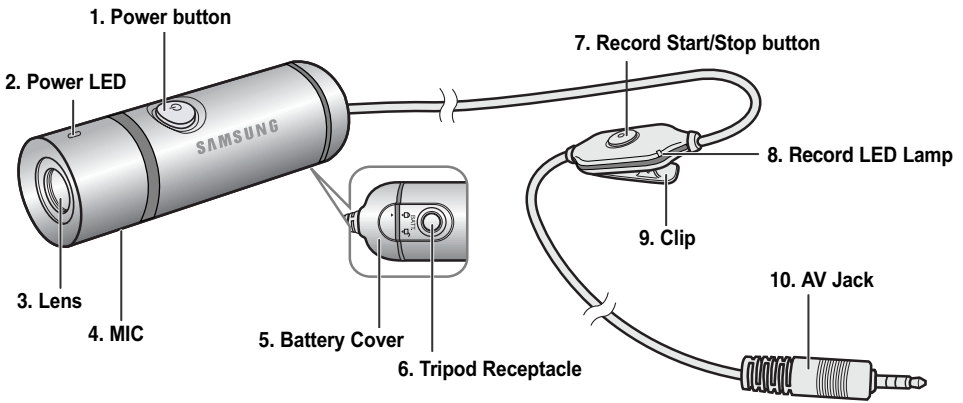
Right & Bottom View



1	Lens	6	Volume +, - / MF button
2	Light	7	Tripod Receptacle
3	Earphones and AV Input/Output Jack	8	Cradle Receptacle
4	Battery insertion part	9	Strap Hook
5	Battery eject button		

Name of Each Part

External Camera Module View

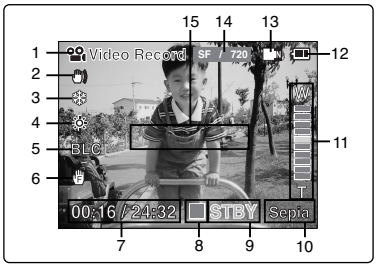


1	Power button	6	Tripod Receptacle
2	Power LED	7	Record Start/Stop button
3	Lens	8	Record LED Lamp
4	MIC	9	Clip
5	Battery Cover	10	AV Jack

Name of Each Part: LCD Display

OSD (On Screen Display in Video Record Mode/Video Play Mode)

Video Record Mode



1. Mode indicator
2. EIS indicator
3. Program AE indicator
4. White Balance indicator
5. BLC indicator
6. Focus indicator
7. Counter
   (Elapsed time / Remaining time)
8. Record/Standby indicator
9. Record/Standby text
10. Effect indicator
11. Zoom in / Zoom out indicator
12. Battery life indicator
13. Memory type indicator
14. Image quality / size indicator
15. Warning and note indicator

Video Play Mode

1. Mode indicator
2. Current display indicator
3. Lock indicator
4. Battery life indicator
5. Memory type indicator
6. Image counter(Current image)

Video Play Mode

7. Warning and note indicator
8. Counter
   (Elapsed time / Recorded time)
9. Operation indicator
   (Play / Pause / RPS / FPS)
10. Volume indicator

Note

❖ Functions will be retained when the CAM is turned off.

Name of Each Part: LCD Display

OSD (On Screen Display in Photo Capture Mode/Photo View Mode)

Photo Capture Mode

1. Mode indicator
2. EIS indicator
3. Program AE indicator
4. White balance indicator
5. BLC indicator
6. Focus indicator
7. Zoom in/out indicator
8. Battery life indicator
9. Memory type indicator
10. Image size indicator
11. Warning and note indicator
12. Light indicator

Photo View Mode

1. Mode indicator
2. Current display indicator
3. Number of print

Photo View Mode

4. Printer indicator
5. Lock indicator
6. Image counter (Current image)

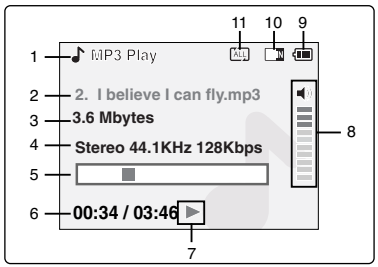
Note

❖ Functions will be retained when the CAM is turned off.

Name of Each Part: LCD Display

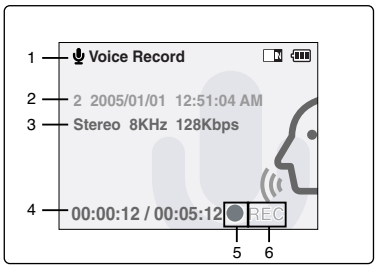
OSD (On Screen Display in MP3 Play Mode/Voice Record/Play Mode)

MP3 Play Mode



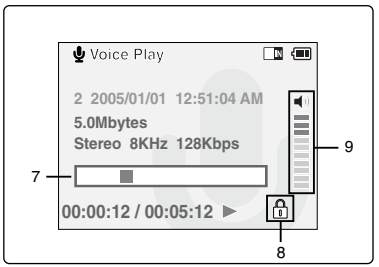
1. Mode indicator
2. File number/File name/File format
3. File size
4. Sampling Rate/Bit Rate
5. Progress Bar
6. Elapsed time/Full time
7. Operation indicator
8. Volume indicator
9. Battery life indicator
10. Memory type indicator
11. Repeat all/one indicator

Voice Record Mode



1. Mode indicator
2. File number/Date and Time
3. Sampling Rate/Bit Rate
4. Elapsed time/Full time
5. Operation indicator
6. Record/Standby text

Voice Play Mode



7. Progress Bar
8. Lock indicator
9. Volume indicator

Note

✤ Functions will be retained when the CAM is turned off.

How to Use the Battery Pack

Battery (Pack) Installation / Ejection

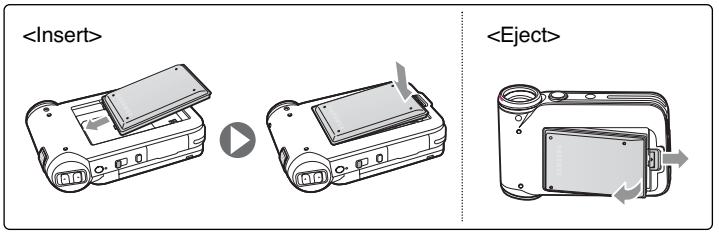
It is recommended you purchase one or more additional battery packs to allow continuous use of your CAM.

To insert the battery pack

Move the battery pack into the groove until it clicks.

To eject the battery pack

Pull the [Battery Eject] button to eject the battery pack.

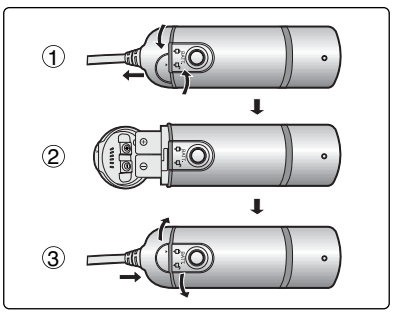


Battery
SB-P90A (900mAh)
SB-P180A (1800mAh) (option)

Notes

- Clean the terminals to remove foreign substances before inserting the battery pack.
- If the CAM will not be in use for a while, remove the battery pack from the CAM.

To insert the batteries for External Camera Module



1. Open the battery cover by turning the lid to align the BATT. open mark ( ) and mark (▲) on the cover.
2. Install two AAA size batteries. Make sure to match the "+" and "-" ends of the batteries with the diagram inside the compartment.
3. Close the battery cover by turning the cover in reversed direction of step 1.

Notes

- Properly dispose of the expired batteries. Contact your local government or community disposal service for disposal practices in your area. Keep them away from small children.
- Do not mix old and new batteries. When replacing the batteries, replace them both.
- If the External Camera Module will not be in use for a while, remove the batteries.
- Do not insert a foreign material or electric conducting material in the battery compartment. It can cause device failure.
- Do not open the battery cover with an excessive force. The connected cable may become disconnected.

How to Use the Battery Pack

Maintain the Battery Pack

- The battery pack should be recharged in an environment of between 32°F(0°C) and 104°F(40°C).
- The battery pack should never be charged in a room temperature that is below 32°F(0°C).
- The life and capacity of the battery pack will be reduced if it is used in temperatures below 32°F(0°C) or left in temperatures above 104°F(40°C) for a long period.
- Do not put the battery pack near any heat sources (fire or flames, for example).
- Do not disassemble, process, press or heat the Battery Pack.
- Do not allow the + and - terminals of the battery pack to be short-circuited. It may cause leakage, heat generation, induce fire and overheating.
- It is recommended to use original battery pack that is available at SAMSUNG service centre.

How to Use the Battery Pack

Continuous recording time based on battery type

If you close the LCD screen, it switches off automatically.
The continuous recording times given in the table below are approximations. Actual recording time depends on usage.

Time / Battery	Continuous Recording Time	
	LCD ON	Backlight OFF
SB-P90A (900mAh)	Approx. 60 min.	Approx. 80 min.
SB-P180A (1800mAh) (option)	Approx. 120 min.	Approx. 160 min.

Notes

- Prepare an extra battery if you use the CAM outdoors.
- Contact the Samsung service centre to purchase new battery pack.
- If you zoom in or out, the recording time becomes shorter.
- 'Continuous Recording Time' indicates the time that you neither use zooming function nor play video files and record the video file continuously when the EIS( ) function is off.

Warning

- When you eject the battery pack from the CAM, hold the battery pack to prevent it dropping to the floor.

How to Use the Battery Pack

Battery Level Display

The Battery Level Display shows the amount of battery power remaining in the Battery Pack.

Battery Level Indicator	State	Message
	Fully charged	-
	40~60% used	-
	60~80% used	-
	80~95% used	-
	Exhausted(flickers) The device will soon turn off. Change the Battery Pack as soon as possible.	-
	(flickers) The device will be forced to turn off after 5 seconds.	"Battery Low"

Tips for Battery Identification

A charge mark is provided on the battery pack to help you remember whether it has been charged or not. If the battery has been fully charged, the charge indicator is green. If you are charging the battery, the colour of the charge indicator is orange. The charge indicator flickers if the battery is abnormal.

Charging time based on battery type

Capacity	Power On	Power Off
SB-P90A (900mAh)	Approx. 6 hr. 30 min	Approx. 1 hr. 40 min
SB-P180A (1800mAh) (option)	Approx. 13 hr.	Approx. 3 hr. 20 min

How to Use the Battery Pack

Charging the Battery Pack

1. **Move [Mode Selector] up to turn the CAM off.**
2. **Attach the Battery Pack to the CAM.**
3. **Fix the CAM into the cradle.**
4. **Connect the DC cable to the DC in jack on the cradle.**
   - ◆ You can detach the AC adapter by pressing the buttons on the sides of the adapter cable plug while pulling it out.
5. **Insert the AC power adapter into the outlet.**

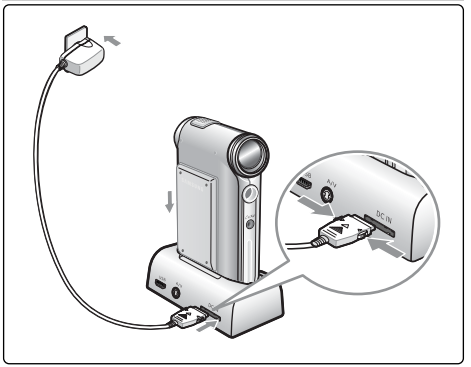
Note

- ❖ You can charge the battery pack when you use the CAM. Connect the AC power adapter with the CAM directly.

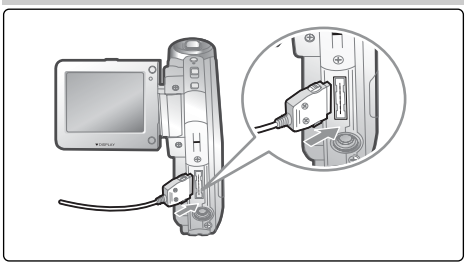
Warning

- ❖ It is recommended you fully charge the battery pack before use.
- ❖ You should only charge the battery in an environment between 0°C and 40°C.

Charging through the cradle



Charging directly to the CAM



Getting Started

The Colour of the LED

The colour of the LED varies depending on the state of power or charging.

When the AC Adapter is plugged in

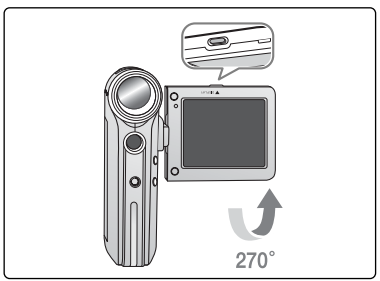
LED Colour	Power	Charging state
Red	Voice / Video Record	-
Green	On	-
Orange	Off	Charging
Green	Off	Fully charged
Orange Blink	-	Error

When the AC Adapter is unplugged

LED Colour	Power	Charging state
Green	On	-
Orange	Off	-
Red	Voice / Video Record	-

Using Hardware Reset Function

1. **Remove the battery pack and the AC adapter.**
2. **Turn the LCD monitor at an angle of 270°.**
3. **Press the [Display] button.**



Note

- If you reset the CAM, all functions you set are initialized.

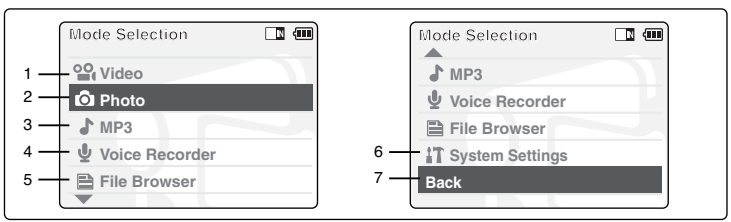
Getting Started

Before You Start Operating the CAM

Before using the CAM, refer to this page for easy operation. The Memory Stick is an optional accessory and not included.

1. **Install the battery pack and insert the Memory Stick into the Memory Stick slot.** (Refer to page 34)
2. **Charge the battery pack by fixing the CAM into the cradle and connecting the power cable to the cradle.** (Refer to page 24)
3. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
4. **Move the [▲/▼] switch to select the desired mode and press the [OK] button.**
5. **Press the [OK] button to take pictures, record, hear music or record voice.**
   Press the [Menu] button to view the menu.
6. **When you finished, move [Mode Selector] up to turn the CAM off.**

For example : If you want to select Photo Mode



1. Video: You can record and play video files.
2. Photo: You can take and view photo files.
3. MP3: You can download and hear the music.
4. Voice Recorder: You can record and hear the voice.
5. File Browser: You can delete, lock, copy the file and view the file information.
6. System Settings: You can set the LCD monitor brightness/colour, date/time, system and memory.
7. Back: The screen moves to previous menu in the selected mode.

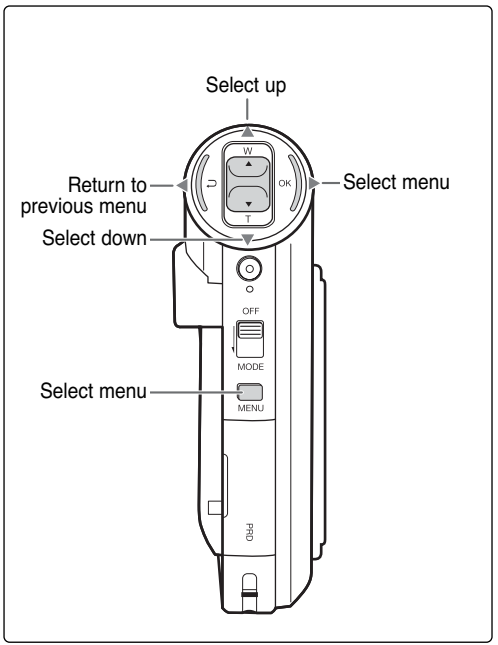
Getting Started

Using the Function Button

The Function button is used to make a selection, move the cursor, select the functions and exit from the menu.

The Use of Various Function button

Button	Recording / Picture taking	Playing/Viewing	Selecting
	Zoom out (▲)	RPS (◀◀)	Select up
	Zoom in (▼)	FPS (▶▶)	Select down
	Multi-Play screen	Multi-Play screen	Return to previous menu
	Change from Record/ Capture to Play/View	Play/Pause	Confirm selecting



Notes

- If there is no file when you press the [OK] button in Video Record/Photo Capture, no change occurs.
- Refer to page 41 for further details about the function button.

The Use of [Back] and [Menu] button

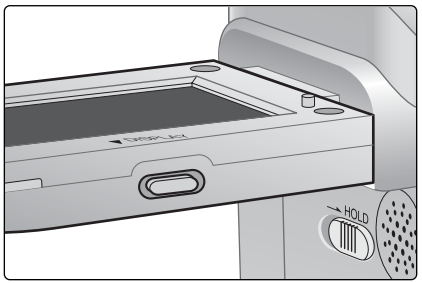
Button	Video Record/Photo Capture	Video Play/Photo View
	Move to Video Play/ Photo View	Move to Video Recoed/ Photo Capture
MENU (Press for about 2 seconds)	Move to <Settings>	Move to <File Options>

Getting Started

Using the Display Button

You can use various functions by pressing the [Display] button.

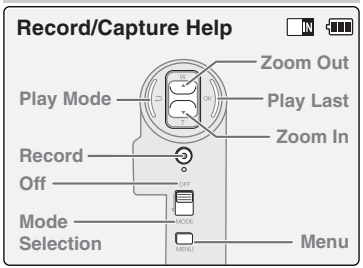
1. **Open the LCD monitor.**
2. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The video screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
3. **Press the [Display] button.**



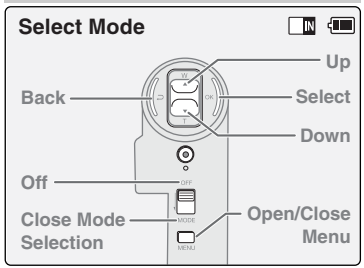
If you press the [Display] button

- ✤ Once: The display indicators turn off.
- ✤ Twice: The back light turns off.
- ✤ 3 times: It returns to the initial screen.
- ✤ Hold down the button for 2 seconds: The [Help] screen according to each mode appears.

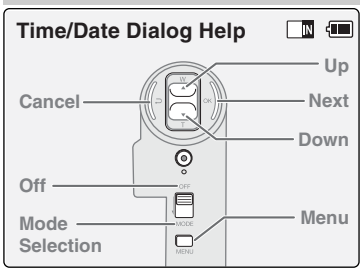
Record/Capture Help



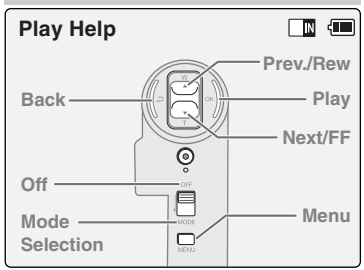
Select Mode Help



Time/Date Dialog Help



Play Help

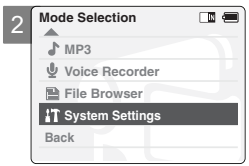


Getting Started

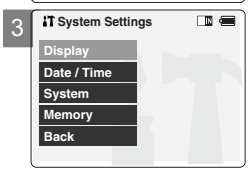
Adjusting the LCD Monitor

Your the CAM is equipped with a colour Liquid Crystal Display monitor, which enables you to view directly what you are recording or playing back. Depending on the conditions under which you are using the CAM (indoors or outdoors for example), you can adjust the LCD Brightness or Colour.

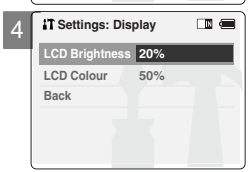
1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.



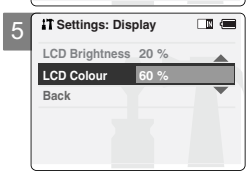
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**



3. **Move the [▲/▼] switch to select <Display> and press the [OK] button.**



4. **Move the [▲/▼] switch to select <LCD Brightness> or <LCD Colour> and press the [OK] button.**



5. **Move the [▲/▼] switch to select desired brightness or colour and press the [OK] button.**
   ◆ Refer to pages 88~89 for details.

Notes

- If you select [Back] in the menu, the previous menu appears.
- If it is too bright, adjust the LCD Brightness.

Structure of the Folders and Files

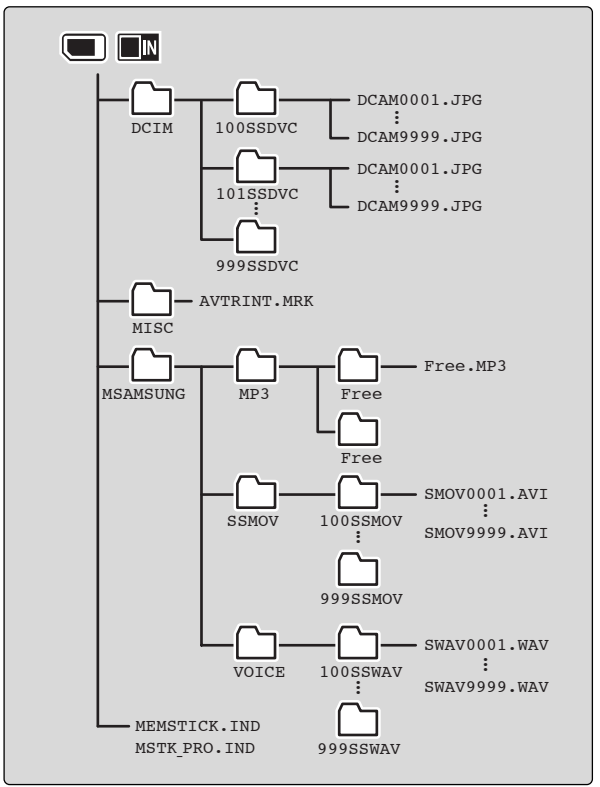
The video files and photo files are stored in internal memory, Memory Stick or Memory Stick Pro as below.

Notes

- Refer to page 34 for details about Memory Stick.
- You can store general data in files and folders of the CAM.
- The number of the file is up to 9,999 and folder is up to 999.
- DCAM****.JPG: Photo file
  SMOV****.AVI: Video file
  SWAV****.WAV: Voice file
  ********.MP3: MP3 file
- MISC: DPOF files are stored.
- Do not change the file or folder name except 'Free'.
- You can freely change the file or folder name of 'Free'.
- Video files that you have not made with the CAM may not be able to be played.

Warning

- Do not turn the power off while recording, playing, erasing file or formatting the Memory Stick.
- Please turn the power off before you insert or eject the Memory Stick to avoid losing data.
- Save important files separately.



Getting Started

Recording Time and Capacity

Video Record Time

Media	Capacity	Super Fine		Fine		Normal	
		352	720	352	720	352	720
Internal Memory	512MB(VP-X105L)	approx. 21min.	approx. 10min.	approx. 32min.	approx. 16min.	approx. 65min.	approx. 32min.
	1GB(VP-X110L)	approx. 44min.	approx. 22min.	approx. 66min.	approx. 33min.	approx. 132mi.	approx. 66min.
Memory Stick	32MB	X	X	approx. 2min.	X	approx. 4min.	approx. 2min.
	64MB	X	X	approx. 4min.	X	approx. 8min.	approx. 4min.
	128MB	X	X	approx. 8min.	X	approx. 16min.	approx. 8min.
Memory Stick Pro	256MB	approx. 10min.	approx. 5min.	approx. 15min.	approx. 7min.	approx. 30min.	approx. 15min.
	512MB	approx. 20min.	approx. 10min.	approx. 31min.	approx. 15min.	approx. 62min.	approx. 31min.
	1GB	approx. 42min.	approx. 21min.	approx. 63min.	approx. 31min.	approx. 126min.	approx. 63min.

Warning

- The compressibility is changed automatically depending on the recorded images and the maximum recording time and capacity can be changed in 'Video Record'.
- You may be not able to record or play normal video files if you use the Memory Stick over 1GB capacity.
- You can record video files with size of 720/Normal, 352/Normal and 352/Fine in the Memory Stick but the quality is not guaranteed.
- If you record video files with the quality of Normal(352/720) in the internal memory, Memory Stick or Memory Stick Pro, the recording time becomes longer but the video may have lower quality than other quality level.
- The recording time and capacity may vary by generating the bad sector when you record video files in the Memory Stick and Memory Stick Pro.

Number of Photo Capture

Media	Capacity	Quality	
		800×600	640×480
Internal Memory	512MB	approx. 5019	approx. 8258
	1GB	approx. 9803	approx. 16129
Memory Stick	32MB	approx. 313	approx. 516
	64MB	approx. 627	approx. 1032
	128MB	approx. 1254	approx. 2064
Memory Stick Pro	256MB	approx. 2509	approx. 4129
	512MB	approx. 5019	approx. 8258
	1GB	approx. 9803	approx. 16129

Voice Record Time

Media	Capacity	Time
Internal Memory	512MB	approx. 8hr.
	1GB	approx. 18hr.
	32MB	approx. 33min.
Memory Stick	64MB	approx. 1hr.
	128MB	approx. 2hr.
	256MB	approx. 4hr.
Memory Stick Pro	512MB	approx. 8hr.
	1GB	approx. 17hr.

Notes

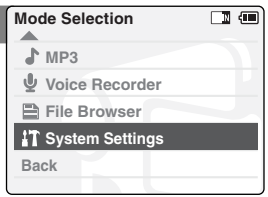
- The recording time and capacity is an approximation.
- You can format the Memory Stick on the CAM. (Refer to page 101)
- Do not format the Memory Stick or Memory Stick Pro on the PC.
- The recording time and the number of images shown are maximum figures based on using one function. In actual use, using more than one function will reduce the capacity of each.
- If you set the light, you can take fewer photos than mentioned number of image.
- If you format the Memory Stick or Memory Stick Pro, use the Memory Stick Formatter in the supplied software CD.

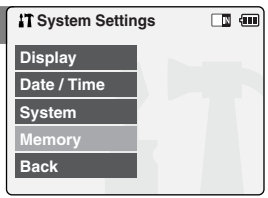
Getting Started

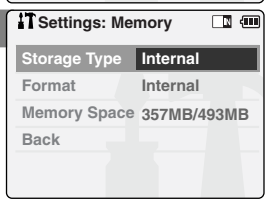
Selecting the Memory Type

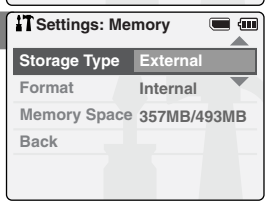
You can select the memory type - internal memory or external memory(Memory Stick, Memory Stick Pro).
The Memory Stick is an optional accessory.
The video file and the photo files are stored in internal memory by default.

1. **Insert the Memory Stick.** (Refer to page 34)
2. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
3. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Memory> and press the [OK] button.**
5. **Move the [▲/▼] switch to select <Storage Type> and press the [OK] button.**
6. **Move the [▲/▼] switch to select desired type and press the [OK] button.**
   ◆ You can select external or internal memory.









Note

✤ If you insert the Memory Stick or Memory Stick Pro, the memory type selection screen appears automatically.

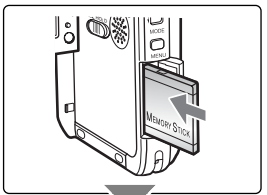
Using the Memory Stick (Optional Accessory)

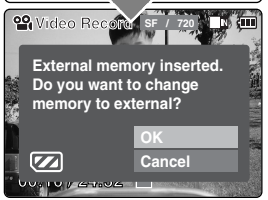
Inserting a Memory Stick

1. **Open the LCD monitor.**
2. **Open the Memory Stick slot lid.**
3. **Insert the Memory Stick into the slot until it softly clicks.**
4. **Close the slot lid.**

Caution: This screen will appear if the Memory Stick is inserted with the power on.

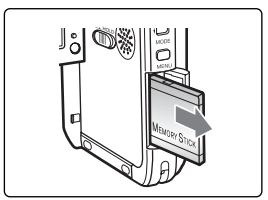
- ◆ If you select <OK>, the memory type changes to 'External' and if you select <Cancel>, files are stored in internal memory.
- ◆ If you insert a locked Memory Stick, the [ ] icon is displayed next to the memory type indicator.





Ejecting a Memory Stick

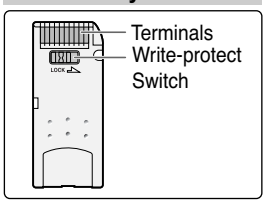
1. **Open the LCD monitor.**
2. **Open the Memory Stick slot lid.**
3. **Slightly push the Memory Stick inwards to pop it out.**
4. **Pull the Memory Stick out of the slot and close the lid.**



Notes

- ✤ Do not apply excessive force when you insert / eject the Memory Stick.
- ✤ Do not turn the power off while recording, playing, erasing files or formatting the Memory Stick.
- ✤ Please turn the power off before you insert or eject the Memory Stick to avoid losing data.
- ✤ Do not place the Memory Stick near a strong electro-magnetic device.
- ✤ Do not allow metal substances to come in contact with the terminals on the Memory Stick.
- ✤ Do not bend the Memory Stick.
- ✤ After pulling the card out from the CAM, keep the Memory Sticks in a soft case to prevent static shock.
- ✤ The data stored on the card may be changed or lost as a result of misuse, static electricity, electric noise or repair. Save important files separately.
- ✤ Samsung is not responsible for data loss due to misuse.

The Memory Stick View



MEMORY STICK TM

✤ Memory Stick and MEMORY STICK TM are trademarks of Sony Corporation.
✤ All other product names mentioned herein may be the trademarks or registered trademarks of their respective companies. "TM" will not be mentioned in every instance in this manual.

Getting Started

Mode and Menu Selection

You can select the mode and menu as follows. There are 2 ways of selecting menu. Select the way you prefer.

Mode Selection

1. **Move the [Mode Selector] down to turn on the CAM and move it down again.**
2. **Move the [▲/▼] switch to select a desired mode and press the [OK] button.**

Menu Selection

1. **Press the [Menu] button after selecting the desired mode.**
2. **Move the [▲/▼] switch to select a desired menu and press the [OK] button.**

SPECIAL OPERATION

1. Press the [Menu] button for 2 seconds.
   ◆ The menu screen of the selected mode appears.

Note

✤ User's manual only describes the first way of performing an operation.
There may be other and more convenient ways for you to use the CAM.

1 Video Mode

Recording 37
Recording 37
Zooming In and Out 38
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Playing 40
Playing on the LCD Monitor 40

Selecting File Options 42
Deleting Video files 42
Locking Video files 43
Copying Video files 44
Setting the PB Option 45

Setting Various Functions 46
Setting the Video file Size 46
Setting the Video file Quality 47
Setting the Focus 48
Setting the EIS 49
Setting the White Balance 50
Setting the Program AE 51
Setting the BLC 52
Setting the Effect 53
Setting the Digital Zoom 54

Note

✤ You can set the time and date in System Settings. Refer to pages 90~91.

Video Mode : Recording

Recording

You can record moving person and objects and store it in memory.
Refer to the page 108 for recording video using the External Camera Module.

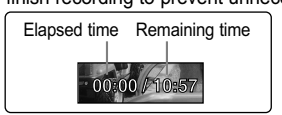
1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)

2. **Press [Record/Stop] button to start recording.**
   - ◆ [● REC] indicator displays on LCD.
   - ◆ The elapsed time is displayed and it starts recording.

3. **Press the [Record/Stop] button again to stop recording.**
   - ◆ It stops recording and the CAM is ready again.
4. **Move [Mode Selector] up to turn off the CAM.**

Notes

- ❖ If you press the [Record] button and press it in 1 second, new video file is not made.
- ❖ If the Auto Shut Off is set, the CAM turns off automatically after 5 minutes.
- ❖ Detach the Battery Pack when you finish recording to prevent unnecessary battery power consumption.
- ❖ You can check the recording time.



Video Mode : Recording

Zooming In and Out

Zooming technique lets you change the size of the subject captured in a scene.

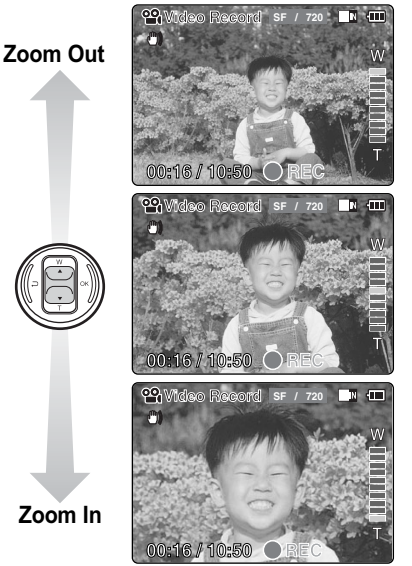
1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
2. **Press the [Record/Stop] button to start recording.**

Move the [▲/▼] switch up to zoom out.

- The subject appears farther away when you zoom out.

Move the [▲/▼] switch down to zoom in.

- The subject appears closer when you zoom in.



Notes

- ❖ Frequent use of zooming may result in higher battery power consumption.
- ❖ Refer to page 54 about Digital Zoom.

Video Mode : Recording

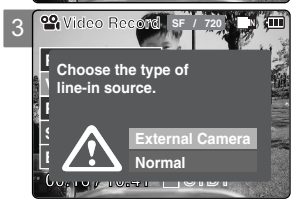
Setting the Video In

Video In function works only in Video mode.
Video In setting enables you to record signal from external sources or External Camera Module and display it on LCD monitor.
Also, you can direct your video or image to external devices to record or play back.

1. **Move [Mode Selector] down to turn on the CAM.**
   ◆ The Video Record screen appears.

2. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <Video In>.

3. **"Choose the type of line-in source" message appears.**
   Move the [▲/▼] switch to select <External Camera> when using the external camera or <Normal> when using just the camcorder, then press the [OK] button.
   If <External Camera> is selected, "External" appears on the screen and enables you to record signal from External Camera Module.
   If <Normal> is selected, "Normal" appears on the screen and enables you to record signal from external sources.
   ◆ It is recommended that only digital devices (DVD, DVC, etc.) are used as external sources.



Note

- When the External Camera Module is connected, [Record/Stop] button of the main set does not operate.

Video Mode : Playing

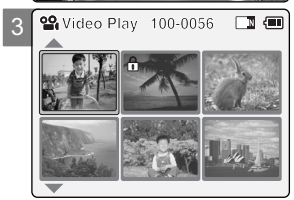
Playing on the LCD Monitor

It is handy and practical to view video files using the LCD monitor almost anywhere such as in a car, indoors or outdoors.

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)

2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Play>.**

3. **Move the [▲/▼] switch to find the video file you want to play.**
   - ◆ Each time you move the [▲/▼] switch, the frame moves horizontally.
   - ◆ Each time you press the [+]/[-] button, a page(6 frame) moves.



4. **Press [OK] button to play the video file you want.**
   - ◆ Each time you press the [OK] button, play or pause is selected repeatedly.
5. **Press the [OK] button again to pause.**

Video Mode : Playing

The button and switch you use when playing the video file

[OK] Button: Play or pause the video file

[▲] Switch: In Video Play mode: Press it to move to previous file.
Press and hold it to use RPS function. (RPS rate: 2x→4x→8x→16x→32x→64x→128x)

[▼] Switch: In Video Play mode: Press it to move to next file.
Press and hold it to use FPS function. (FPS rate: 2x→4x→8x→16x→32x→64x→128x)
In Video Play mode: Press and hold it to play slowly when paused.
Press it to move to the next frame when paused.

Adjusting the Sound

1. **Press the [OK] button to play the video file.**

2. **Press the [+] button to increase the volume.**
   - ◆ Each time you press the [+] button, the volume bar increases and the sound level will get louder.
   - ◆ The volume bar disappears after 1~2 seconds.

3. **Press the [-] button to decrease the volume.**
   - ◆ Each time you press the [-] button, the volume bar decreases and the sound level will get quieter.
   - ◆ The volume bar disappears after 1~2 seconds.

Notes

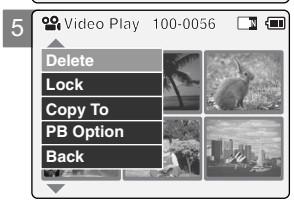
- ❖ You can adjust the volume up to 10 steps.
- ❖ You can also play the video file on a TV screen by connecting the CAM to a TV. (Refer to page 112)
- ❖ It is necessary to install Image Mixer for playback video files recorded on the CAM on your PC.

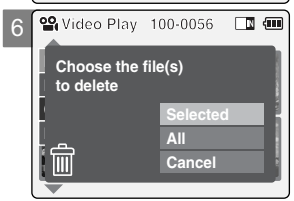
Video Mode : Selecting File Options

Deleting Video files

You can delete video files in <File Options>.

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting [Play].**
3. **Move the [▲/▼] switch to select the video file you want to delete.**
4. **Press the [Menu] button to select <File Options> and press the [OK] button.**
   - ◆ You can select <File Options> only in Video Play mode.
5. **Move the [▲/▼] switch to select <Delete> and press the [OK] button.**
6. **Move the [▲/▼] switch to select the followings. Press the [OK] button.**
   - ◆ **Selected**: The selected video file is deleted.
   - ◆ **All**: All video files are deleted.
   - ◆ **Cancel**: Cancel deleting video files.





Note

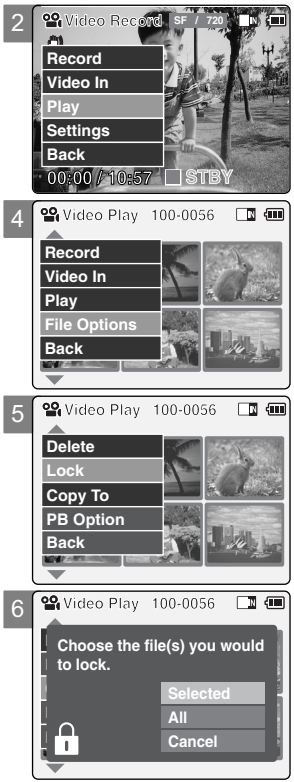
❖ Press and hold the [Menu] button in Video Play, you can move to <File Options> directly.

Video Mode : Selecting File Options

Locking Video files

You can lock the important video file to prevent accidental deletion.

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Play>.**
3. **Move the [▲/▼] switch to select the video file you want to lock.**
4. **Press the [Menu] button to select <File Options> and press the [OK] button.**
   - ◆ You can select <File Options> only in Video Play mode.
5. **Move the [▲/▼] switch to select <Lock> and press the [OK] button.**
6. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   - ◆ **Selected**: The selected video file is locked.
   - ◆ **All**: All video files are locked.
   - ◆ **Cancel**: Cancel locking video files.



Notes

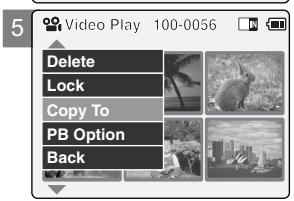
- ❖ Press and hold the [Menu] button in Video Play mode, you can move to <File Options> directly.
- ❖ The < 🔒 > icon is displayed on the locked file.

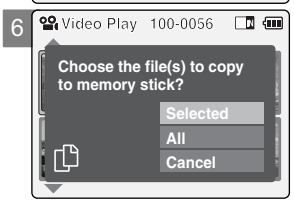
Video Mode : Selecting File Options

Copying Video files

You can copy the video file to the internal or external memory.

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Play>.**
3. **Move the [▲/▼] switch to select the video file you want to copy.**
4. **Press the [Menu] button to select <File Options> and press the [OK] button.**
   - ◆ You can select <File Options> only in Video Play mode.
5. **Move the [▲/▼] switch to select <Copy To> and press the [OK] button.**
   - ◆ If you selected video 'External' as the Storage type, the file is copied to 'internal' and vice versa.
6. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   - ◆ **Selected**: Copy the selected video file.
   - ◆ **All**: Copy all video files.
   - ◆ **Cancel**: Cancel copying video files.





Note

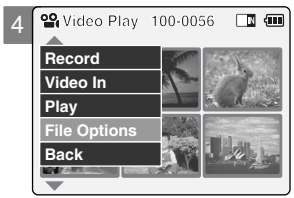
❖ Press and hold the [Menu] button in Video Play mode, you can move to <File Options> directly.

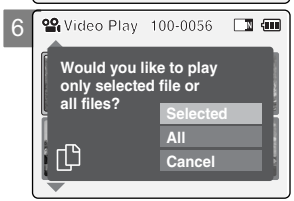
Video Mode : Selecting File Options

Setting the PB Option

You can play all files continuously or play only selected file.

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Play>.**
3. **Move the [▲/▼] switch to select the video file you want to set the function.**
4. **Press the [Menu] button to select <File Options> and press the [OK] button.**
   - ◆ You can select <File Options> only in Video Play mode.
5. **Move the [▲/▼] switch to select <PB Option> and press the [OK] button.**
6. **Move the [▲/▼] switch to select the following and press the [OK] button.**
   - ◆ **Selected**: Play the selected video file.
   - ◆ **All**: Play all video files.
   - ◆ **Cancel**: Cancel setting PB Option.





Note

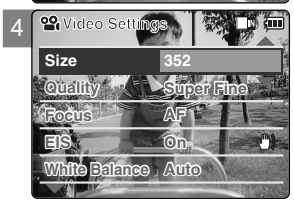
❖ Press and hold the [Menu] button in Video Play mode, you can move to <File Options> directly.

Video Mode : Setting Various Functions

Setting the Video file Size

You can set the file size for video files. The number of stored files varies depending on the Memory Stick capacity and video file size.

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Settings>.**
3. **Move the [▲/▼] switch to select <Size> and press the [OK] button.**
   - ◆ **720**: Select 720 pixel.
   - ◆ **352**: Select 352 pixel.
4. **Move the [▲/▼] switch to select the video file size and press the [OK] button.**
5. **Press the [Menu] button to finish setting.**
   - ◆ The icon of selected function is displayed.



Notes

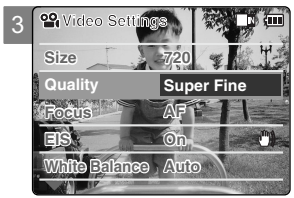
- ❖ If you select <Back> in the menu, the previous menu appears.
- ❖ Press and hold the [Menu] button in Video Record mode, you can move to <Settings> directly.

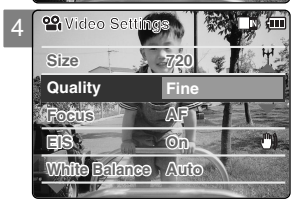
Video Mode : Setting Various Functions

Setting the Video file Quality

You can set the quality for video files. The number of stored files varies depending on the Memory Stick capacity and video file quality.

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Settings>.**
3. **Move the [▲/▼] switch to select <Quality> and press the [OK] button.**
   - ◆ **SF**(Super Fine): Select highest quality.
   - ◆ **F**(Fine): Select high quality.
   - ◆ **N**(Normal): Select normal quality.
4. **Move the [▲/▼] switch to select the video file quality and press the [OK] button.**
5. **Press the [Menu] button to finish setting.**
   - ◆ The icon of selected function is displayed.





Notes

- ❖ If you select <Back> in the menu, the previous menu appears.
- ❖ If you use the Memory Stick, you can select the size and quality of 720/Normal, 352/Fine and 352/Normal only.
- ❖ Press and hold the [Menu] button in Video Record mode, you can move to <Settings> directly.

Video Mode : Setting Various Functions

Setting the Focus

You can set the focus depending on the subject or the environment. In most situations, you can record best using AF(Auto Focus).

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)

2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Settings>.**

3. **Move the [▲/▼] switch to select <Focus> and press the [OK] button.**
   - ◆ **AF**: Set the focus automatically. When the CAM turns on, AF is selected in default.
   - ◆ **MF(** **)**: Set the focus manually.

4. **Move the [▲/▼] switch to select desired setting and press the [OK] button.**

5. **Press the [Menu] button to finish setting.**
   - ◆ The icon of selected function is displayed.
   - ◆ If you select the AF, any icon is not displayed.

Manual Focus

Adjust the focus using [+] / [-] button to zoom in or out manually.

- ◆ When a picture contains objects that are both close and far away from the CAM.
- ◆ When a person is enveloped in fog or surrounded by snow.

Notes

- ❖ If you select <Back> in the menu, the previous menu appears.
- ❖ Press and hold the [Menu] button in Video Record mode, you can move to <Settings> directly.

Video Mode : Setting Various Functions

Setting the EIS (Electronic Image Stabilizer)

The Electrical Image Stabilizer is a function that compensates for hand shake and other movements while recording.
EIS provides more stable video when:

- ◆ Recording with zooming
- ◆ Recording small objects
- ◆ Recording while walking or moving
- ◆ Recording through the window in the vehicle

1. Move [Mode Selector] down to turn on the CAM.

- ◆ The Video Record screen appears.
- ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)

2. Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Settings>.

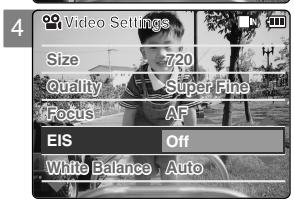
3. Move the [▲/▼] switch to select <EIS> and press the [OK] button.

- ◆ **On(** ✋ **)**: Set the EIS function.
- ◆ **Off**: Cancel the EIS function.

4. Move the [▲/▼] switch to select desired setting and press the [OK] button.

5. Press the [Menu] button to finish setting.

- ◆ The icon of selected function is displayed.



Notes

- ❖ If you select <Back> in the menu, the previous menu appears.
- ❖ Press and hold the [Menu] button in Video Record mode, you can move to <Settings> directly.

Video Mode : Setting Various Functions

Setting the White Balance

The White Balance may vary depending on the lighting conditions.
The White Balance is used to preserve natural colours under different lighting conditions.

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Settings>.**
3. **Move the [▲/▼] switch to select <White Balance> and press the [OK] button.**
   - ◆ **Auto**: Adjust the colour depending on the condition automatically.
   - ◆ **Hold( )**: Record with first selected colour without adjusting colour.
   - ◆ **Outdoor( )**: Record with the balanced light. (Natural light)
   - ◆ **Indoor( )**: Record with the balanced light. (Glow lamp or light in the studio)
4. **Move the [▲/▼] switch to select desired setting and press the [OK] button.**
5. **Press the [Menu] button to finish setting.**
   - ◆ The icon of selected function is displayed.
   - ◆ If you select <Auto>, any icon is not displayed.

Notes

- ❖ If you select <Back> in the menu, the previous menu appears.
- ❖ Turn the Digital Zoom off for more accurate White Balance setting.
- ❖ Press and hold the [Menu] button in Video Record mode, you can move to <Settings> directly.

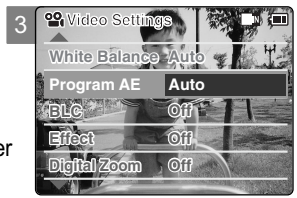
Video Mode : Setting Various Functions

Setting the Program AE (Programmed Auto Exposure)

It allows you to adjust the aperture setting to suit different conditions.

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)

2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Settings>.**



3. **Move the [▲/▼] switch to select <Program AE> and press the [OK] button.**
   - ◆ **Auto**: Auto balance between the subject and background to get the best result. The shutter speed automatically varies from 1/60 to 1/250 per second depending on the scene.
   - ◆ **Sports(🏃)**: For recording fast-moving people or objects. It is suitable for sports events, recording outside in the car.
   - ◆ **Spotlight(🔦)**: Compensates for a subject that appears too bright under strong direct light such as spotlight. It is suitable for concert and school performance.
   - ◆ **Sand/Snow(❄)**: Use when the light is very strong such as on the beach or in the snow.
   - ◆ **HS Shutter(⊘)**: Allows fast-moving images to be captured one frame at a time.

4. **Move the [▲/▼] switch to select desired setting and press the [OK] button.**

5. **Press the [Menu] button to finish setting.**
   - ◆ The icon of selected function is displayed.
   - ◆ If you select <Auto>, any icon is not displayed.

Notes

- ❖ If you select <Back> in the menu, the previous menu appears.
- ❖ Press and hold the [Menu] button in Video Record mode, you can move to <Settings> directly.

Video Mode : Setting Various Functions

Setting the BLC (Backlight Compensation)

The Backlight Compensation function helps to make the subject brighter when the subject is in front of a window or the subject is too dark to distinguish. You can use this function when using your the CAM in the bright background and snowy background.

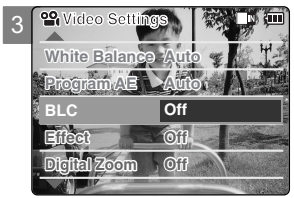
1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)

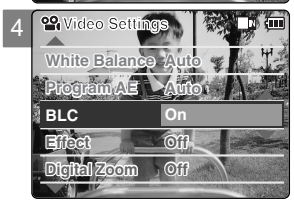
2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Settings>.**

3. **Move the [▲/▼] switch to select <BLC> and press the [OK] button.**
   - ◆ **On(BLC)**: Set the BLC function.
   - ◆ **Off**: Cancel the BLC function.

4. **Move the [▲/▼] switch to select desired setting and press the [OK] button.**

5. **Press the [Menu] button to finish setting.**
   - ◆ <BLC> is displayed.





Notes

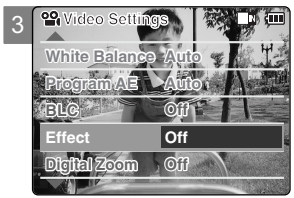
- ❖ If you select <Back> in the menu, the previous menu appears.
- ❖ Press and hold the [Menu] button in Video Record mode, you can move to <Settings> directly.

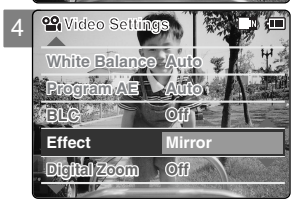
Video Mode : Setting Various Functions

Setting the Effect

You can create professional looking effect on your video file.

1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)
2. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Settings>.**
3. **Move the [▲/▼] switch to select <Effect> and press the [OK] button.**
   - ◆ **Off**: Cancel the <Effect>.
   - ◆ **Art**: Artistic effects on your video file.
   - ◆ **Mosaic**: A mosaic overlay appears on your video file.
   - ◆ **Sepia**: The picture is displayed in sepia colour similar to that of an old photograph.
   - ◆ **Negative**: Reverses the colours, creating the look of a negative.
   - ◆ **Mirror**: This mode cuts the picture in half using a Mirror effect.
   - ◆ **B&W**: Changes the images into Black and White.
   - ◆ **Emboss**: Embossing effects on your video file.
4. **Move the [▲/▼] switch to select desired setting and press the [OK] button.**
5. **Press the [Menu] button to finish setting.**
   - ◆ The letters of selected function is displayed.





Notes

- ❖ If you select <Back> in the menu, the previous menu appears.
- ❖ Press and hold the [Menu] button in Video Record mode, you can move to <Settings> directly.

Video Mode : Setting Various Functions

Setting the Digital Zoom

Zooming more than 10x is achieved digitally, up to 100X when combined with optical zoom.
The Digital Zoom processes data to enlarge the centre portion of the image to fill the frame may produce a less detailed and slightly grainy picture.

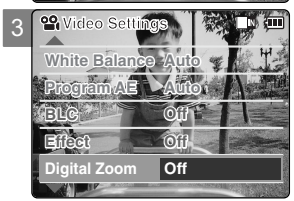
1. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ The Video Record screen appears.
   - ◆ You can select Video mode or Previous mode as the start-up mode in System Settings. (Refer to page 96)

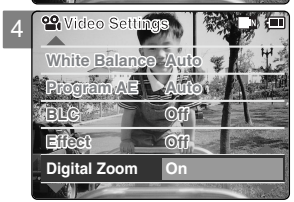
2. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <Settings>.

3. **Move the [▲/▼] switch to select <Digital Zoom> and press the [OK] button.**
   - ◆ **On**: Set the Digital Zoom. (X100)
   - ◆ **Off**: Cancel the Digital Zoom.

4. **Move the [▲/▼] switch to select desired setting and press the [OK] button.**

5. **Press the [Menu] button to finish setting.**
   - ◆ 4 zoom indicators increase after setting the Digital Zoom.





Notes

- ❖ If you select <Back> in the menu, the previous menu appears.
- ❖ Press and hold the [Menu] button in Video Record mode, you can move to <Settings> directly.

2 Photo Mode

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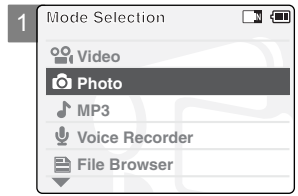
Photo Mode : Capturing

Capturing Images

You can take photo as well as record video files.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.



2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The CAM is ready for taking pictures.
   ◆ [📷] indicator is displayed on LCD.

3. **Press [Record/Stop] button to take pictures.**

Note

❖ If the battery is low and the battery charge icon blinks, the light will not operate and light icon is set to off state.

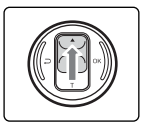
Photo Mode : Capturing

Zooming In and Out

Zooming technique lets you change the size of the subject captured in a scene.

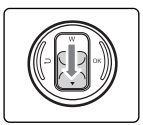
1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.

2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ To take pictures, press the [Record/Stop] button again.



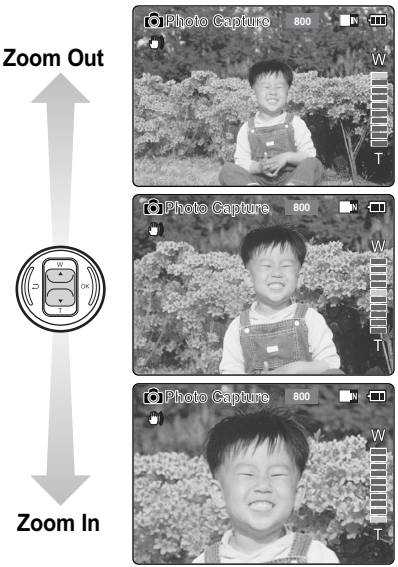
Move the [▲/▼] switch up to zoom out.

- The subject appears farther away when you zoom out.



Move the [▲/▼] switch down to zoom in.

- The subject appears closer when you zoom in.



Note

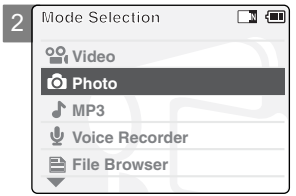
❖ Frequent use of zooming may result in higher battery power consumption.

Photo Mode : Viewing

Viewing Photo files on the LCD Monitor

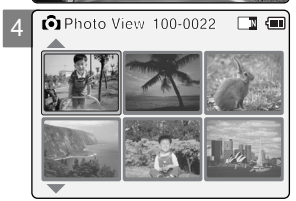
It is handy and practical to view pictures using the LCD monitor almost anywhere such as in a car, indoors or outdoors.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.



3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <View>.

4. **Move the [▲/▼] switch to find the photo you want to view.**
   ◆ Each time you move the [▲/▼] switch, the frame moves horizontally.
   ◆ Each time you press the [+]/[-] button, another page of 6 frames is displayed.



5. **Press [OK] button to view the photo you want.**
   ◆ The full screen is displayed.

Note

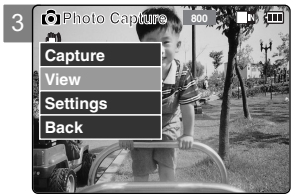
❖ Display time may vary depending on the picture size.

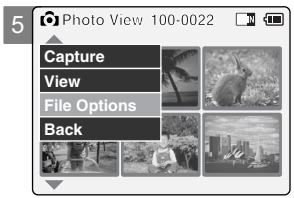
Photo Mode : Selecting File Options

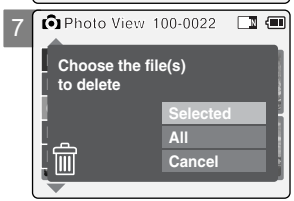
Deleting Photo files

You can delete photo files in <File Options>.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <View>.
4. **Move the [▲/▼] switch to select the photo file you want to delete.**
5. **Press the [Menu] button to select <File Options> and press the [OK] button.**
   ◆ You can select <File Options> only in Photo View mode.
6. **Move the [▲/▼] switch to select <Delete> and press the [OK] button.**
7. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   ◆ **Selected**: The selected photo file is deleted.
   ◆ **All**: All photo files are deleted.
   ◆ **Cancel**: Cancel deleting photo files.







Note

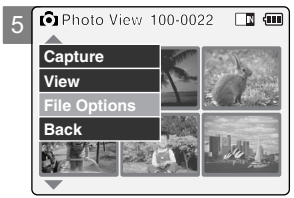
❖ Press and hold the [Menu] button in Photo View mode, you can move to <File Options> directly.

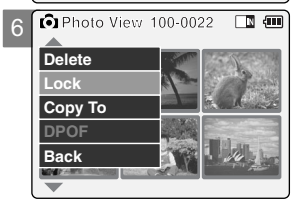
Photo Mode : Selecting File Options

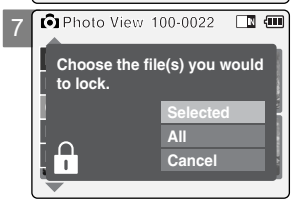
Locking Photo files

You can lock the important photo file not to be deleted.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <View>.
4. **Move the [▲/▼] switch to select the photo file you want to lock.**
5. **Press the [Menu] button to select <File Options> and press the [OK] button.**
   ◆ You can select <File Options> only in Photo View mode.
6. **Move the [▲/▼] switch to select <Lock> and press the [OK] button.**
7. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   ◆ **Selected**: The selected photo file is locked.
   ◆ **All**: All photo files are locked.
   ◆ **Cancel**: Cancel locking photo files.







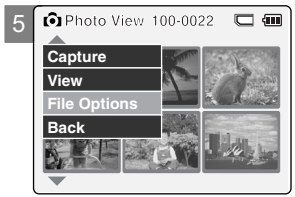
Notes

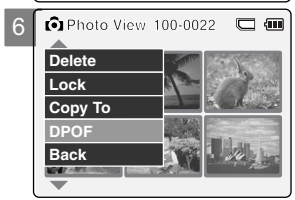
- Press and hold the [Menu] button in Photo View mode, you can move to <File Options> directly.
- The < 🔒 > icon is displayed on the locked file.

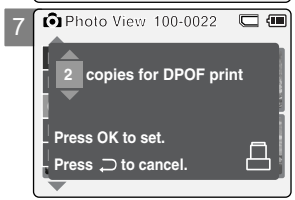
Photo Mode : Selecting File Options

Setting DPOF (Digital Print Order Format) Function

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <View>.
4. **Move the [▲/▼] switch to select the photo file you want to print.**
5. **Press the [Menu] button to select <File Options> and press the [OK] button.**
6. **Move the [▲/▼] switch to select <DPOF> and press the [OK] button.**
   ◆ You can select <DPOF> only when you've selected storage type 'External'.
   Refer to page 33.
7. **Move the [▲/▼] switch to select copies you want to print and press the [OK] button to set.**







Notes

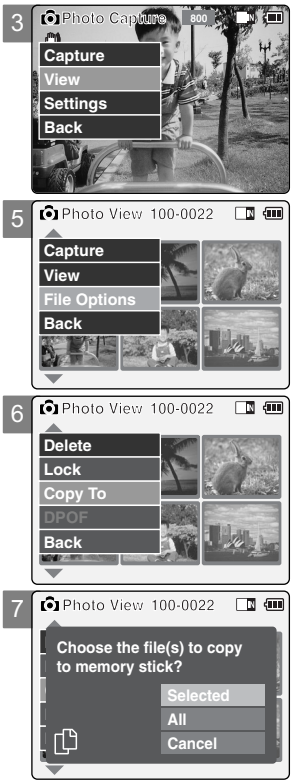
- Press and hold the [Menu] button in Photo View mode, you can move to <File Options> directly.
- Refer to page 123 for further details about printing DPOF files.
- You can set copies for DPOF print up to 30.

Photo Mode : Selecting File Options

Copying Photo files

You can copy photo files to the internal or external memory.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <View>.
4. **Move the [▲/▼] switch to select the photo file you want to copy.**
5. **Press the [Menu] button to select <File Options> and press the [OK] button.**
   ◆ You can select <File Options> only in Photo View mode.
6. **Move the [▲/▼] switch to select <Copy To> and press the [OK] button.**
   ◆ If you selected the Storage type 'External', the file is copied to 'Internal' and vice versa.
7. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   ◆ **Selected**: Copy the selected photo file.
   ◆ **All**: Copy all photo files.
   ◆ **Cancel**: Cancel copying photo files.



Note

❖ Press and hold the [Menu] button in Photo View mode, you can move to <File Options> directly.

Photo Mode : Setting Various Functions

Setting the Photo file Size

You can set the photo files size. The number of stored files varies depending on the Memory Stick capacity, photo files size.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <Settings>.
4. **Move the [▲/▼] switch to select <Size> and press the [OK] button.**
   ◆ You can select 800x600 or 640x480 size.
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
6. **Press the [Menu] button to finish setting.**

Notes

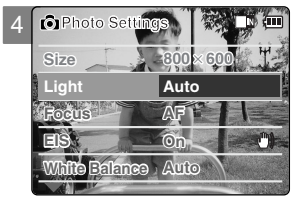
- If you select <Back> in the menu, the previous menu appears.
- Press and hold the [Menu] button in Photo Capture mode, you can move to <Settings> directly.

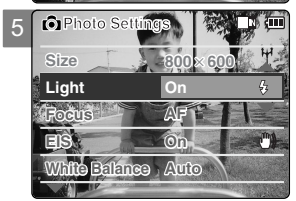
Photo Mode : Setting Various Functions

Setting the Light

The Light only works in Photo Mode and allows the user to take photographs in dark places such as during the night, shaded or dark areas and indoors.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <Settings>.
4. **Move the [▲/▼] switch to select <Light> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
   ◆ **Auto**: Set the light automatically.
   ◆ **On( )**: Turn on the light.
   ◆ **Off( )**: Turn off the light.
6. **Press the [Menu] button to finish setting.**
   ◆ The icon of selected function is displayed.





Notes

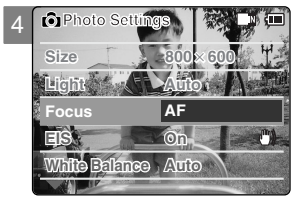
- If you select <Back> in the menu, the previous menu appears.
- Press and hold the [Menu] button in Photo Capture mode, you can move to <Settings> directly.
- If the battery is low and the battery charge icon blinks, the light will not operate and light icon is set to off state.

Photo Mode: Setting Various Functions

Setting the Focus

You can set the focus depending on the subject or the environment.
In most situations, you can record the best photo using AF(Auto Focus).

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <Settings>.
4. **Move the [▲/▼] switch to select <Focus> and press the [OK] button.**
   ◆ **AF**: Set the focus automatically. When the CAM turns on, AF is selected in default.
   ◆ **MF(** **)**: Set the focus manually.
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
6. **Press the [Menu] button to finish setting.**
   ◆ The icon of selected function is displayed.
   ◆ If you select the AF, no icon is displayed.



Manual Focus

Adjust the focus using [+]/ [-] button to zoom in or out manually.

◆ When a picture has subjects close and distant to the CAM
◆ When a person is enveloped in fog or surrounded by snow

Notes

- If you select <Back> in the menu, the previous menu appears.
- Press and hold the [Menu] button in Photo Capture mode, you can move to <Settings> directly.

Photo Mode : Setting Various Functions

Setting the EIS (Electronic Image Stabilizer)

The Electrical Image Stabilizer is a function that compensates for hand shake and other movements while taking pictures.
Refer to page 49 for further details.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <Settings>.
4. **Move the [▲/▼] switch to select <EIS> and press the [OK] button.**
   ◆ **On(** **)**: Set the EIS function.
   ◆ **Off**: Cancel the EIS function.
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
6. **Press the [Menu] button to finish setting.**
   ◆ The icon of selected function is displayed.

Notes

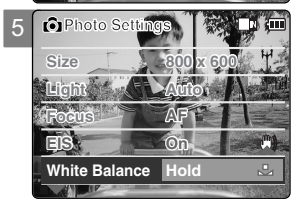
- If you select <Back> in the menu, the previous menu appears.
- Press and hold the [Menu] button in Photo Capture mode, you can move to <Settings> directly.

Photo Mode : Setting Various Functions

Setting the White Balance

The colour balance may vary depending on the lighting conditions.
The White Balance is used to preserve natural colours under different lighting conditions.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <Settings>.
4. **Move the [▲/▼] switch to select <White Balance> and press the [OK] button.**
   ◆ **Auto**: Adjust the colour depending on the condition automatically.
   ◆ **Hold( )**: Record with first selected colour without adjusting colour.
   ◆ **Outdoor( )**: Record with the balanced light. (Natural light)
   ◆ **Indoor( )**: Record with the balanced light. (Glow lamp, light in the studio or video light)
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
6. **Press the [Menu] button to finish setting.**
   ◆ The icon of selected function is displayed.
   ◆ If you select <Auto>, no icon is displayed.



Notes

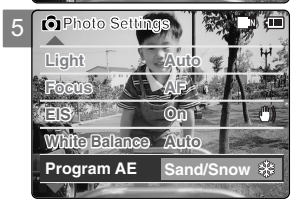
- If you select <Back> in the menu, the previous menu appears.
- Press and hold the [Menu] button in Photo Capture mode, you can move to <Settings> directly.

Photo Mode : Setting Various Functions

Setting the Program AE (Programmed Auto Exposure)

It allows you to adjust the aperture setting to suit different conditions.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   - ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   - ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <Settings>.
4. **Move the [▲/▼] switch to select <Program AE> and press the [OK] button.**
   - ◆ **Auto**: Auto balance between the subject and background to get the best result. The shutter speed automatically varies from 1/60 to 1/250 per second depending on the scene.
   - ◆ **Sports(🏃)**: For fast-moving people or objects. It is suitable for sports events or when you are outside in the car.
   - ◆ **Spotlight(🔦)**: Compensates for a subject that appears too bright under strong direct light such as spotlight. It is suitable for concert and school performance.
   - ◆ **Sand/Snow(❄)**: Use when the light is very strong such as on the beach or in the snow.
   - ◆ **HS Shutter(⊗)**: Allows fast-moving images to be captured one frame at a time.
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
6. **Press the [Menu] button to finish setting.**
   - ◆ The icon of selected function is displayed.
   - ◆ If you select <Auto>, any icon is not displayed.



Notes

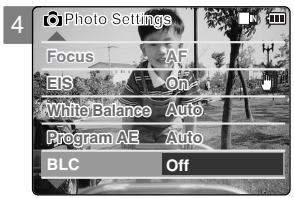
- ❖ If you select <Back> in the menu, the previous menu appears.
- ❖ Press and hold the [Menu] button in Photo Capture mode, you can move to <Settings> directly.

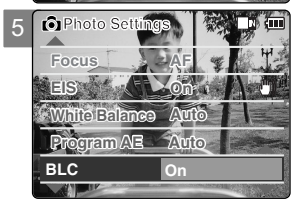
Photo Mode : Setting Various Functions

Setting the BLC (Backlight Compensation)

The Backlight Compensation function helps to make the subject brighter when the subject is in front of a window or the subject is too dark to distinguish. You can use this function when using the CAM in the bright backgrounds including snow scenes.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Photo* mode and press the [OK] button.**
   ◆ The Photo Capture screen appears.
3. **Press the [Menu] button and move the [▲/▼] switch.**
   Press the [OK] button after selecting <Settings>.
4. **Move the [▲/▼] switch to select <BLC> and press the [OK] button.**
   ◆ **On(BLC)**: Set the BLC function.
   ◆ **Off**: Cancel the BLC function.
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
6. **Press the [Menu] button to finish setting.**
   ◆ <BLC> is displayed.





Notes

- If you select <Back> in the menu, the previous menu appears.
- Press and hold the [Menu] button in Photo Capture mode, you can move to <Settings> directly.

MEMO

3 MP3 / Voice Recorder Mode / Using File Browser

MP3 Mode

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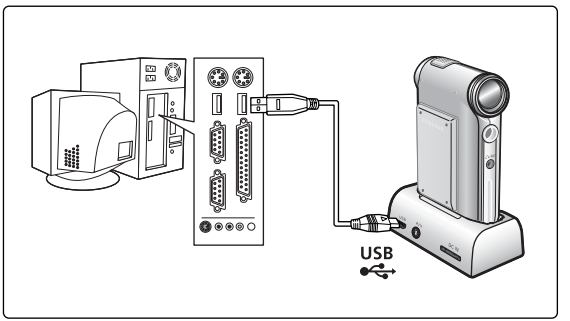
MP3 Mode : Storing Music in the CAM

Copying Music files to the CAM

You can transfer music files from your PC to the internal memory, Memory Stick or Memory Stick Pro. For copying music files, the CAM must be connected to your PC with the USB cable. You don't have to connect the CAM to your PC when you transfer music files to the Memory Stick directly.

1. **Connect the CAM to a PC with the USB cable. (Refer to page 103)**
   - ◆ Your computer recognizes this device and the symbol for removable drive will appear in 'My Computer'.
2. **Double-click the new removable drive to open.**
3. **Select the MP3 folder and double-click to enter.**
4. **Copy the MP3 file you want from PC to the CAM.**
   - ◆ Refer to the folder structure on page 30 for copying MP3 files.



Disconnecting USB Connection

After completing the data transfer, you must disconnect the cable in the following way.

1. Select the removable disk icon and click the right mouse button to select 'Safely Remove Hardware'.
2. Select 'Stop' and disconnect the USB cable when the pop-up screen disappears.

Notes

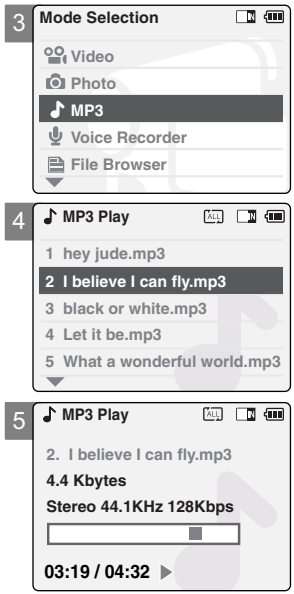
- ❖ The way of transferring, playing with the Memory Stick is same as that of internal memory.
- ❖ Refer to page 120 for installing USB Driver for Windows98SE.

MP3 Mode : Playing

Playing Music files

You can hear the music copied from your PC directly or with the Memory Stick.

1. **Connect the earphones to the CAM.**
   ◆ You can also hear the music from the Built-in speaker without the earphones.
2. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
3. **Move the [▲/▼] switch to select *MP3* mode and press the [OK] button.**
4. **Move the [▲/▼] switch to find the music you want to hear and press the [OK] button.**
   ◆ The selected music is played.
5. **Press the [OK] button again to stop hearing music.**
   ◆ Each time you press the [OK] button, play or pause is selected repeatedly.



The use of [▲/▼] switch

- **Press the [▲] switch**
  First 2 seconds after start playing - the previous file appears.
  2 seconds after start playing - the first scene of the file appears.
- **Press the [▼] switch**
  The next file appears.

Notes

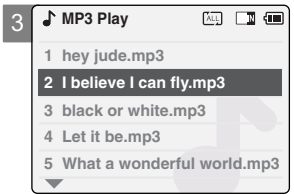
- '----' is displayed depending on the title of MP3 file.
- If you slide the MP3/External Camera Hold switch to on, all buttons except the Power switch and volume +/- button are locked. The MP3/External Camera Hold switch operates only in the MP3/External Camera mode.
- In MP3 playback mode, a file name may not be displayed correctly or an MP3 file may not playback. In this case, rename the file name using English alphabets only.

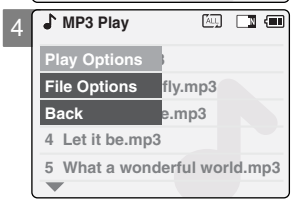
MP3 Mode : Selecting Play Options

Setting Repeat Play

You can play the only one or all music repeatedly.

1. **Connect the earphones to the CAM.**
   ◆ You can also hear the music from the Built-in speaker without the earphones.
2. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
3. **Move the [▲/▼] switch to select MP3 mode and press the [OK] button.**
   ◆ Press the [Menu] button when the music list appears.
4. **Move the [▲/▼] switch to select <Play Options> and press the [OK] button.**





5. **Move the [▲/▼] switch to select <Repeat> and press the [OK] button.**
   ◆ **All**: All files are repeated.
   ◆ **Off**: Cancel the Repeat Play function.
   ◆ **One**: One file is repeated.

6. **Move the [▲/▼] switch to select desired setting and press the [OK] button.**
7. **Press the [Menu] button to finish setting.**

Note

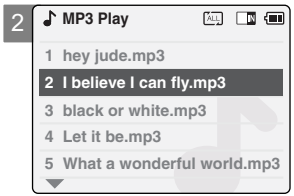
❖ If you select <Back> in the menu, the previous menu appears.

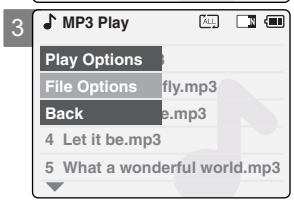
MP3 Mode : Selecting File Options

Deleting Music files

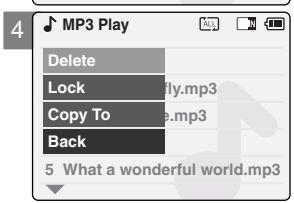
You can delete the music file you want.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select MP3 mode and press the [OK] button.**
   ◆ Press the [Menu] button when the music list appears.
3. **Move the [▲/▼] switch to select <File Options> and press the [OK] button.**

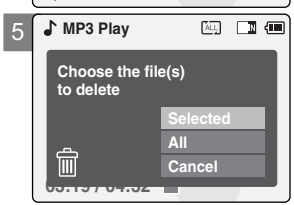




4. **Move the [▲/▼] switch to select <Delete> and press the [OK] button.**



5. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   ◆ **Selected**: The selected music file is deleted.
   ◆ **All**: All music files are deleted.
   ◆ **Cancel**: Cancel deleting music files.



Note

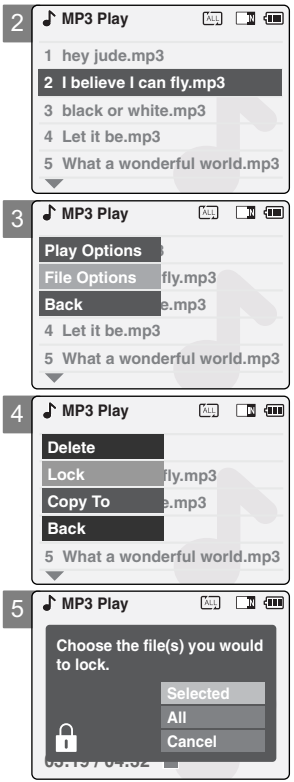
❖ If you select <Back> in the menu, the previous menu appears.

MP3 Mode : Selecting File Options

Locking Music files

You can lock the important music file not to be deleted.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select MP3 mode and press the [OK] button.**
   ◆ Press the [Menu] button when the music list appears.
3. **Move the [▲/▼] switch to select <File Options> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Lock> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   ◆ **Selected**: The selected music file is locked.
   ◆ **All**: All music files are locked.
   ◆ **Cancel**: Cancel locking music files.



Notes

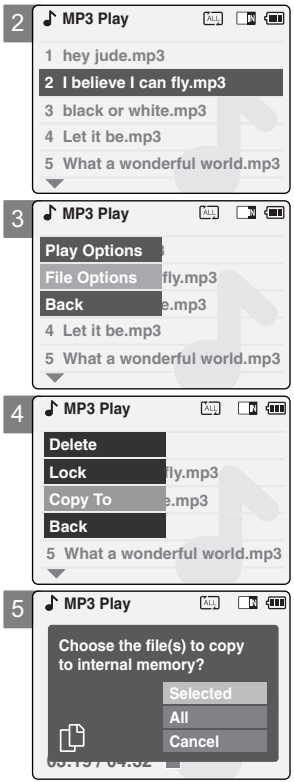
- If you select <Back> in the menu, the previous menu appears.
- The < 🔒 > icon is displayed on the locked file.

MP3 Mode : Selecting File Options

Copying Music files

You can copy the music file to the internal or external memory.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select MP3 mode and press the [OK] button.**
   ◆ Press the [Menu] button when the music list appears.
3. **Move the [▲/▼] switch to select <File Options> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Copy To> and press the [OK] button.**
   ◆ If you selected the Storage type 'External', the file is copied to 'Internal' and vice versa.
5. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   ◆ **Selected**: Copy the selected music file.
   ◆ **All**: Copy all music files.
   ◆ **Cancel**: Cancel copying music files.



Note

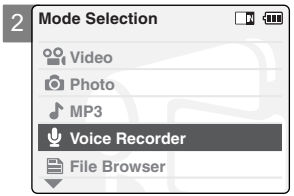
- If you set the Hold function with the MP3/External Camera Hold switch, you can't delete, lock or copy music files. You can only use Power switch and volume [+]/[–] buttons.

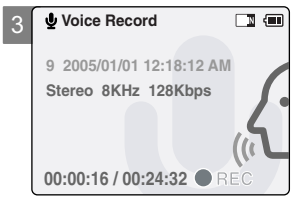
Voice Recorder Mode : Recording

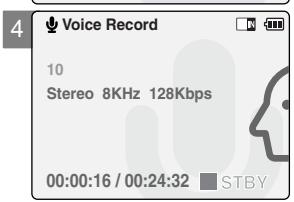
Recording Voice

You can record voice using the built-in microphone in the CAM.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Voice Recorder* mode and press the [OK] button.**
3. **Press the [Record/Stop] button to record voice.**
   ◆ The elapsed time and <● REC> is displayed. It starts recording.
4. **Press the [Record/Stop] button to stop recording voice.**
   ◆ <■ STBY> is displayed and it stops recording.





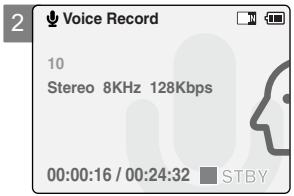


Voice Recorder Mode : Playing

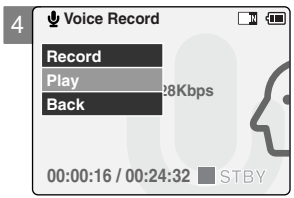
Playing Voice files

You can hear the voice file connecting earphones.

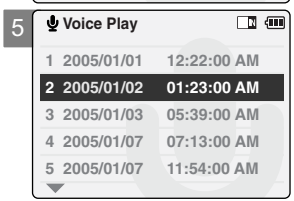
1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Voice Recorder* mode and press the [OK] button.**



3. **Press the [Menu] button when the Voice Record screen appears.**

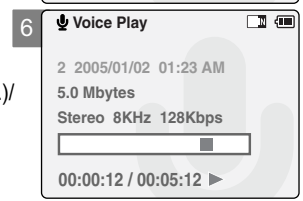


4. **Move the [▲/▼] switch to select <Play> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the file you want to play.**
6. **Press the [OK] button to play the recorded voice.**
   ◆ Press the [OK] button to pause playing.



The button and switch you use when playing the recording

Play/Pause [OK] button: Play or pause the voice file
Rewind [▲] switch: Rewind the voice file backward(Press and hold over 2 seconds during playback.)/ Move to previous file
Fast Forward [▼] switch: Wind the voice file forward(Press and hold over 2 seconds during playback.)/ Move to next file



Note

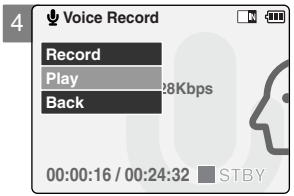
✤ Press the [Back] button while recording standby status to view the file list.

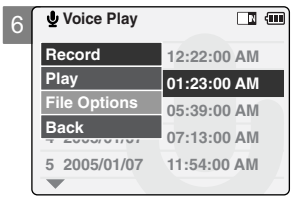
Voice Recorder Mode : Selecting File Options

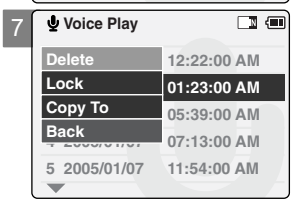
Deleting Voice files

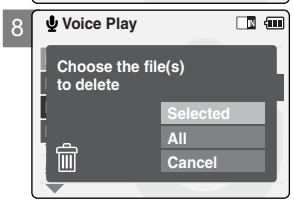
You can delete voice files you want.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Voice Recorder* mode and press the [OK] button.**
3. **Press the [Menu] button when the Voice Record Screen appears.**
4. **Move the [▲/▼] switch to select <Play> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the voice file you want to delete.**
6. **Press the [Menu] button to select <File Options> and press the [OK] button.**
   ◆ You can select <File Options> only in Voice Play mode.
7. **Move the [▲/▼] switch to select <Delete> and press the [OK] button.**
8. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   ◆ **Selected**: The selected voice file is deleted.
   ◆ **All**: All voice files are deleted.
   ◆ **Cancel**: Cancel deleting voice files.









Note

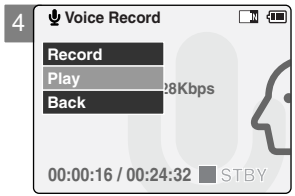
❖ If you select <Back> in the menu, the previous menu appears.

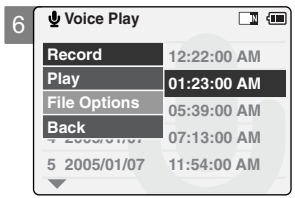
Voice Recorder Mode : Selecting File Options

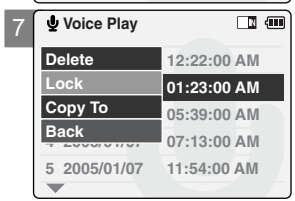
Locking Voice files

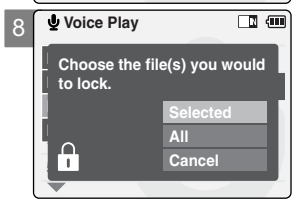
You can lock the important voice file not to be deleted.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Voice Recorder* mode and press the [OK] button.**
3. **Press the [Menu] button when the Voice Record screen appears.**
4. **Move the [▲/▼] switch to select <Play> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the voice file you want to lock.**
6. **Press the [Menu] button to select <File Options> and press the [OK] button.**
   ◆ You can select <File Options> only in Voice Play mode.
7. **Move the [▲/▼] switch to select <Lock> and press the [OK] button.**
8. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   ◆ **Selected**: The selected voice file is locked.
   ◆ **All**: All voice files are locked.
   ◆ **Cancel**: Cancel locking voice files.









Notes

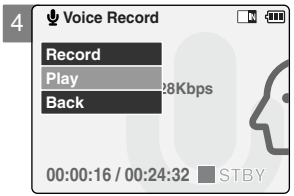
- If you select <Back> in the menu, the previous menu appears.
- The < 🔒 > icon is displayed on the locked file.

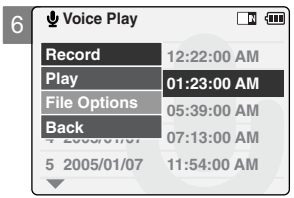
Voice Recorder Mode : Selecting File Options

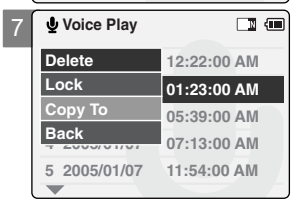
Copying Voice files

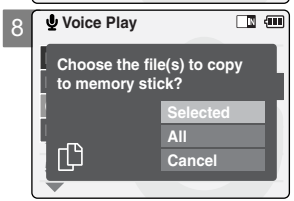
You can copy the voice file to the internal or external memory.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *Voice Recorder* mode and press the [OK] button.**
3. **Press the [Menu] button when the Voice Record screen appears.**
4. **Move the [▲/▼] switch to select <Play> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the voice file you want to copy.**
6. **Press the [Menu] button to select <File Options> and press the [OK] button.**
   ◆ You can select <File Options> only in Voice Play mode.
7. **Move the [▲/▼] switch to select <Copy To> and press the [OK] button.**
   ◆ If you selected the Storage type 'External', the file is copied to 'Internal' and vice versa.
8. **Move the [▲/▼] switch to select the followings and press the [OK] button.**
   ◆ **Selected**: Copy the selected voice file.
   ◆ **All**: Copy all voice files.
   ◆ **Cancel**: Cancel copying voice files.









Note

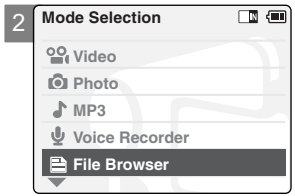
❖ If you select <Back> in the menu, the previous menu appears.

Using File Browser

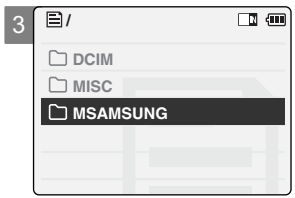
Deleting Files or Folders

You can delete the file(AVI, MP3, JPEG, WAV) or folders you recorded.

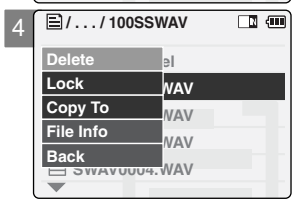
1. **Move the [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *File Browser* and press the [OK] button.**



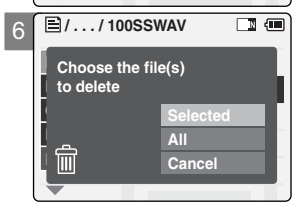
3. **Move the [▲/▼] switch to select the folder to find the file you want to delete. Press the [OK] button.**
   ◆ Press the [Menu] button if you want to delete the selected folder.
   ◆ Perform these steps repeatedly until the file you want to delete appears.



4. **Press the [Menu] button. Move the [▲/▼] switch to select <Delete> and press the [OK] button.**



5. **Move the [▲/▼] button to select the setting you want. Press the [OK] button.**
   ◆ **Selected**: The selected file is deleted.
   ◆ **All**: All files are deleted.
   ◆ **Cancel**: Cancel deleting files.



Note

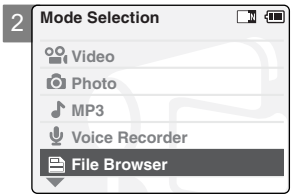
❖ If you select <Back> in the menu, the previous menu appears.

Using File Browser

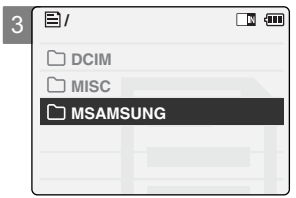
Locking Files

You can lock the important files not to be deleted.

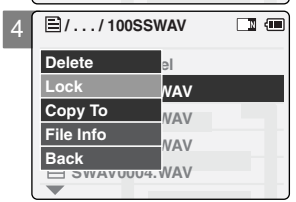
1. **Move the [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *File Browser* and press the [OK] button.**

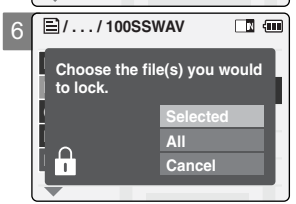


3. **Move the [▲/▼] switch to select the file you want to lock. Press the [OK] button.**
   ◆ Perform these steps repeatedly until the file you want to lock appears.



4. **Press the [Menu] button. Move the [▲/▼] switch to select <Lock> and press the [OK] button.**
5. **Move the [▲/▼] button to select the followings. Press the [OK] button.**
   ◆ **Selected**: The selected file is locked.
   ◆ **All**: All files are locked.
   ◆ **Cancel**: Cancel locking files.





Notes

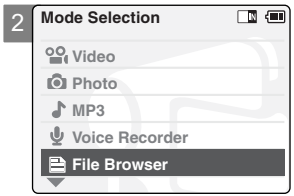
- If you select <Back> in the menu, the previous menu appears.
- You can't lock folders.
- The < 🔒 > icon is displayed on the locked file.

Using File Browser

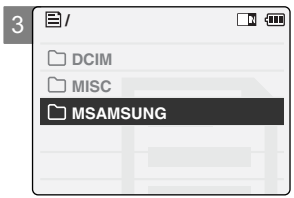
Copying Files or Folders

You can copy the file or folder to the internal or external memory.

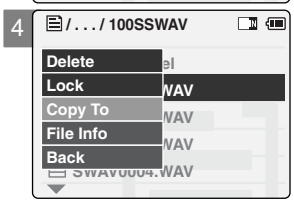
1. **Move the [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *File Browser* and press the [OK] button.**



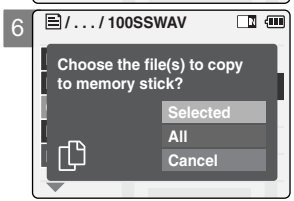
3. **Move the [▲/▼] switch to select the folder to find the file you want to copy. Press the [OK] button.**
   ◆ Press the [Menu] button if you want to copy the selected folder.
   ◆ Perform these steps repeatedly until the file you want to copy appears.



4. **Press the [Menu] button. Move the [▲/▼] switch to select <Copy To> and press the [OK] button.**
   ◆ If you selected the Storage type ‘External’, the file is copied to ‘Internal’.



5. **Move the [▲/▼] button to select the followings. Press the [OK] button.**
   ◆ **Selected**: Copy the selected file.
   ◆ **All**: Copy all files.
   ◆ **Cancel**: Cancel copying files.



Note

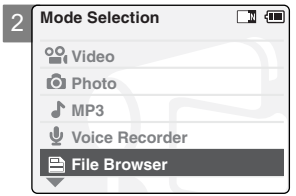
❖ If you select <Back> in the menu, the previous menu appears.

Using File Browser

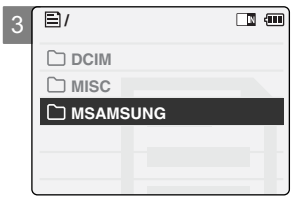
Viewing File Information

You can see the file name, format, size and date.

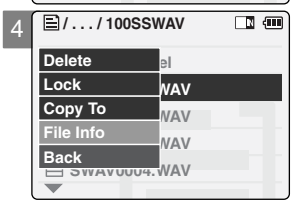
1. **Move the [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *File Browser* and press the [OK] button.**



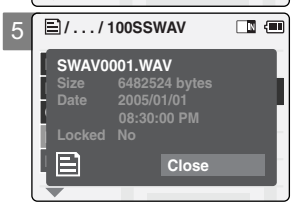
3. **Move the [▲/▼] switch to select the file you want to see its file information. Press the [OK] button.**
   ◆ Perform these steps repeatedly until the file you want to see its file information appears.



4. **Press the [Menu] button. Move the [▲/▼] switch to select <File Info> and press the [OK] button.**
   ◆ The screen with file name, format, size and date appears.



5. **Press the [OK] button to finish viewing file information.**
   ◆ If you select <Close> in the screen, the screen disappears.



4 Setting the CAM

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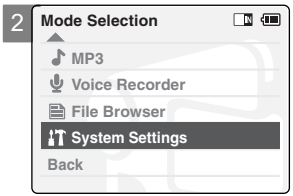
Setting the CAM : Adjusting the LCD Monitor

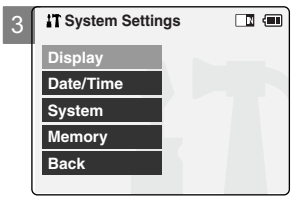
Adjusting the LCD Brightness

You can adjust the brightness of the LCD monitor to compensate for ambient lighting conditions.

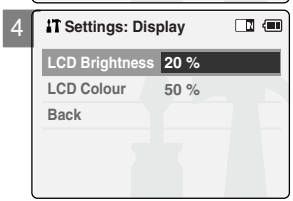
1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**



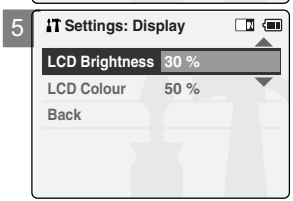
3. **Move the [▲/▼] switch to select <Display> and press the [OK] button.**



4. **Move the [▲/▼] switch to select <LCD Brightness> and press the [OK] button.**
   ◆ You can adjust the LCD Brightness from 0% to 100%.



5. **Move the [▲/▼] switch to select the brightness you want.**
6. **Press the [Back] button to finish setting.**



Notes

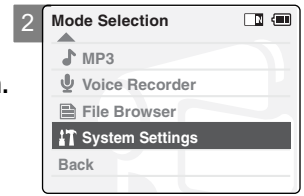
- If you select <Back> in the menu, the previous menu appears.
- A brighter LCD Monitor setting consumes more battery power.

Setting the CAM : Adjusting the LCD Monitor

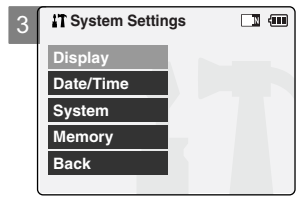
Adjusting the LCD Colour

You can adjust the colour of the LCD monitor depending on the situation.

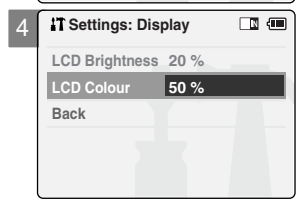
1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**



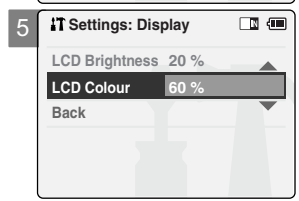
3. **Move the [▲/▼] switch to select <Display> and press the [OK] button.**



4. **Move the [▲/▼] switch to select <LCD Colour> and press the [OK] button.**
   ◆ You can adjust the LCD Colour from 0% to 100%.



5. **Move the [▲/▼] switch to select the colour you want.**
6. **Press the [Back] button to finish setting.**



Note

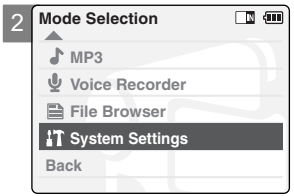
❖ If you select <Back> in the menu, the previous menu appears.

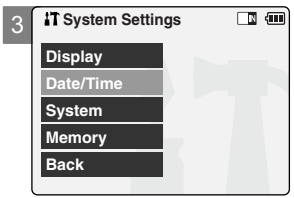
Setting the CAM : Adjusting Date/Time

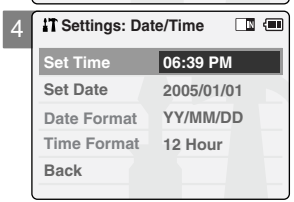
Setting Time

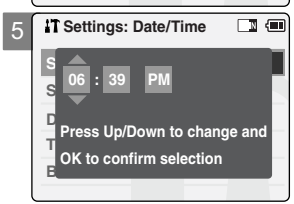
The built-in clock creates the time stamp. You can adjust the time you use.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <Date/Time> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Set Time> and press the [OK] button.**
5. **Move the [▲/▼] switch to set time and press the [OK] button.**
   ◆ Move the [▲/▼] switch to change the setting and press the [OK] button to confirm selection and move to the next setting.
6. **Press the [Back] button to finish setting.**









Note

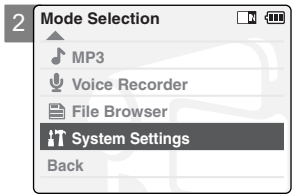
❖ If you select <Back> in the menu, the previous menu appears.

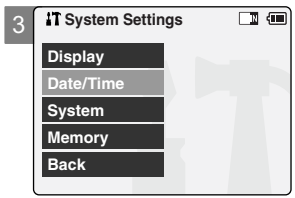
Setting the CAM : Adjusting Date/Time

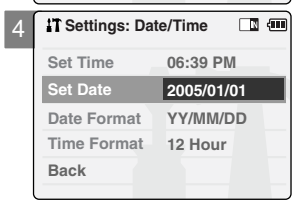
Setting Date

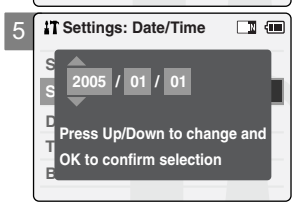
The built-in calendar creates the date stamp. You can adjust the date you use.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <Date/Time> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Set Date> and press the [OK] button.**
5. **Move the [▲/▼] switch to set date and press the [OK] button.**
   ◆ Move the [▲/▼] switch to change the setting and press the [OK] button to confirm selection and move to the next setting.
6. **Press the [Back] button to finish setting.**









Note

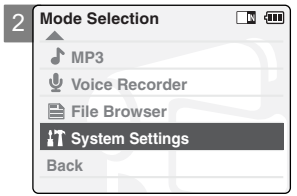
✤ If you select <Back> in the menu, the previous menu appears.

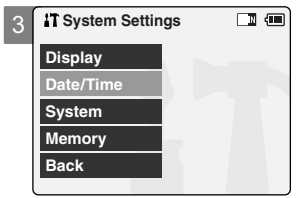
Setting the CAM : Adjusting Date/Time

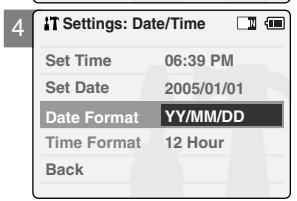
Setting Date Format

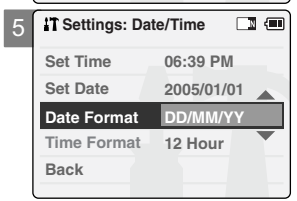
You can select the date format to display.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <Date/Time> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Date Format> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the desired format and press the [OK] button.**
   ◆ **YY/MM/DD**: The date is displayed in order as Year/Month/Date.
   ◆ **DD/MM/YY**: The date is displayed in order as Date/Month/Year.
   ◆ **MM/DD/YY**: The date is displayed in order as Month/Date/Year.
6. **Press the [Back] button to finish setting.**









Note

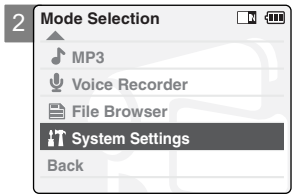
❖ If you select <Back> in the menu, the previous menu appears.

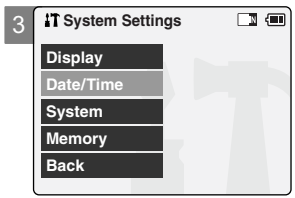
Setting the CAM : Adjusting Date/Time

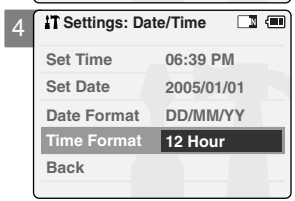
Setting Time Format

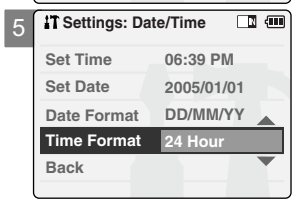
You can select the time format to display.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <Date/Time> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Time Format> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the desired format and press the [OK] button.**
   ◆ **12 Hour**: The time is displayed as the unit of 12 hours.
   ◆ **24 Hour**: The time is displayed as the unit of 24 hours.
6. **Press the [Back] button to finish setting.**









Note

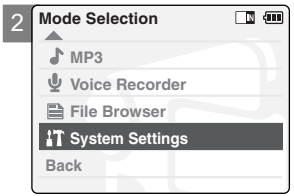
❖ If you select <Back> in the menu, the previous menu appears.

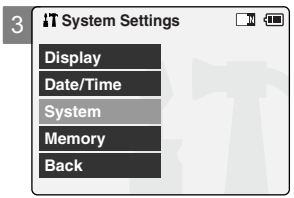
Setting the CAM : Setting the System

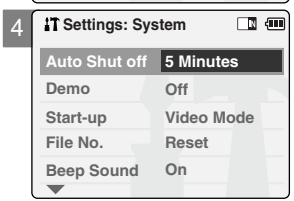
Setting the Auto Shut off

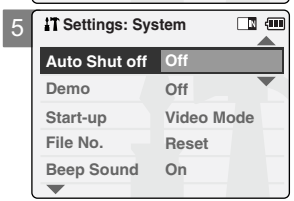
To save energy or battery, you can set the Auto Shut off function.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <System> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Auto Shut off> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
   ◆ **Off**: Cancel the Auto Shut off function.
   ◆ **5 Minutes**: the CAM turns off after 5 minutes.
6. **Press the [Back] button to finish setting.**









Notes

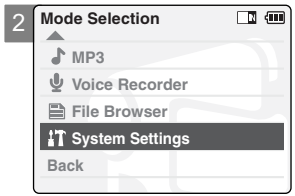
- If the CAM turns off after 5 minutes, you can use the CAM again after turning it on.
- If you select <Back> in the menu, the previous menu appears.
- The <Auto Shut off> function cannot be operated if you connect the power adapter to the CAM. It can be only operated when you insert battery pack into the CAM.

Setting the CAM : Setting the System

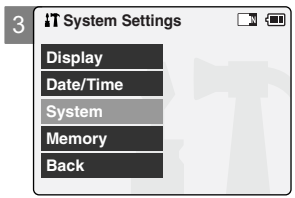
Setting the Demo Function

Demo function will allow you to view all the functions that the CAM supports. Demo will run for up to 5 minutes.

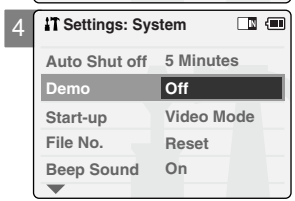
1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**



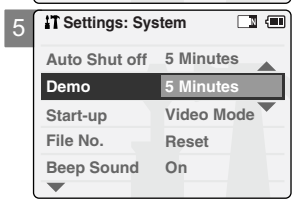
3. **Move the [▲/▼] switch to select <System> and press the [OK] button.**



4. **Move the [▲/▼] switch to select <Demo> and press the [OK] button.**



5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
   ◆ **Off**: Cancel the Demo function.
   ◆ **5 Minutes**: Start the Demo function in 5 minutes.
   ◆ **Play Now**: Start the Demo function now.
6. **Press the [Back] button to finish setting.**



Note

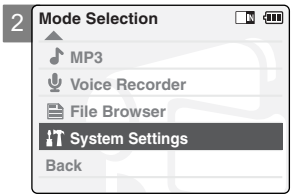
- If you select <Back> in the menu, the previous menu appears.
- If you set the Demo function, it operates only in Video Record mode.

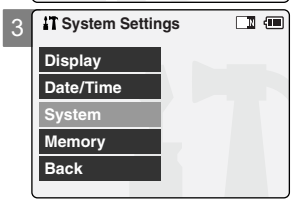
Setting the CAM : Setting the System

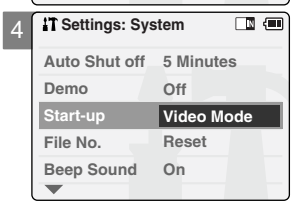
Setting Start-up Mode

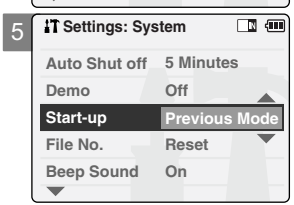
You can select the starting mode displayed when you turn the CAM on.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <System> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Start-up> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
   ◆ **Video Mode**: The CAM starts up in the Video Mode.
   ◆ **Previous Mode**: The CAM starts up in the mode you used last.
6. **Press the [Back] button to finish setting.**









Note

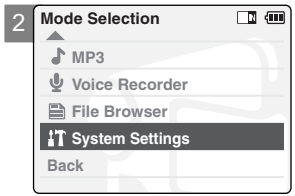
❖ If you select <Back> in the menu, the previous menu appears.

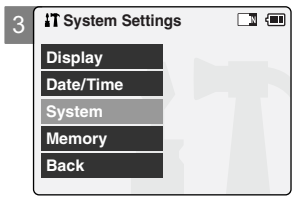
Setting the CAM : Setting the System

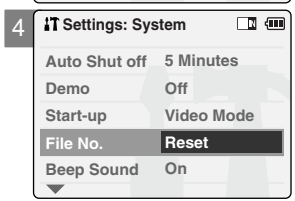
Setting the File No. Function

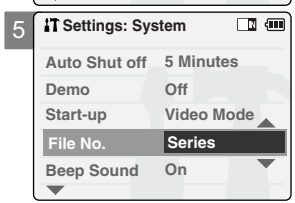
You can set the file numbers so that they reset each time Memory stick is formatted, or so that they count up continuously.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <System> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <File No.> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
   ◆ **Series**: Numbering is continuous between the Memory Sticks, so that the first file number assigned on a new Memory Stick is 1 more than the last file number assigned on the previous Memory Stick.
   ◆ **Reset**: When the Memory Stick is formatted, the file number resets to its default value. (100-0001)
6. **Press the [Back] button to finish setting.**









Notes

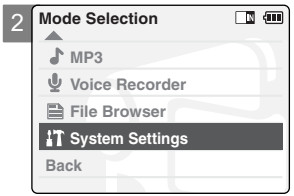
- If you select <Back> in the menu, the previous menu appears.
- When you set file number to 'Series', each file is assigned a different number avoiding duplication of numbers. It is convenient when you want to manage your files on a PC.

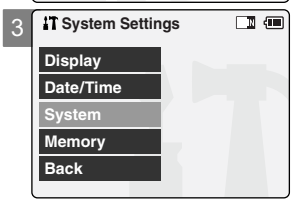
Setting the CAM : Setting the System

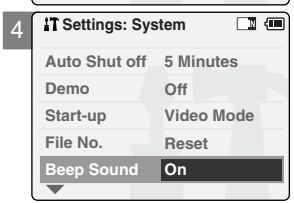
Setting the Beep Sound

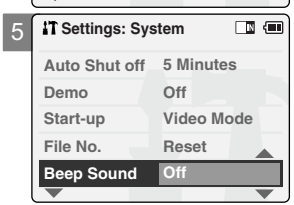
You can set the beep sound on/off. When on, a beep will sound every time a button is pressed.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <System> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Beep Sound> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the desired sound and press the [OK] button.**
   ◆ **On:** Turn the effect sound on.
   ◆ **Off:** Turn the effect sound off.
6. **Press the [Back] button to finish setting.**









Notes

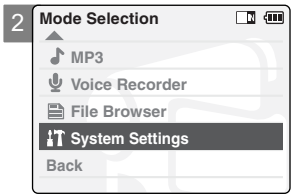
- If you select <Back> in the menu, the previous menu appears.
- When the earphones or Audio/Video cable is connected to the CAM, the beep sound function does not operate.

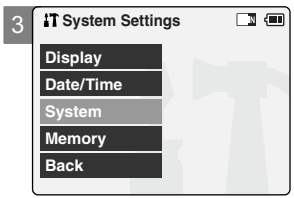
Setting the CAM : Setting the System

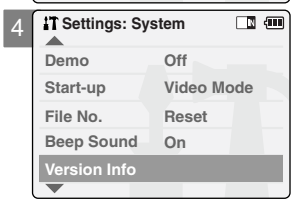
Viewing Version Information

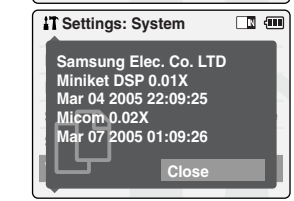
You can see the information of the version.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <System> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Version Info> and press the [OK] button.**
   ◆ The version of the CAM is displayed.
5. **Press the [OK] button to finish viewing version information.**









Note

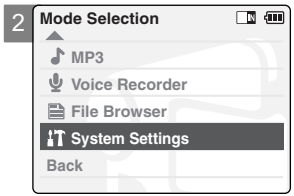
✤ If you select <Back> in the menu, the previous menu appears.

Setting the CAM : Setting Memory

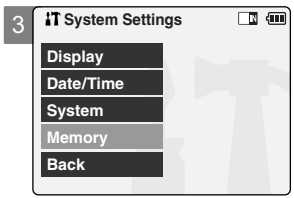
Selecting the Storage Type

Select the storage type(internal or Memory Stick, Memory Stick Pro) before recording or taking pictures.

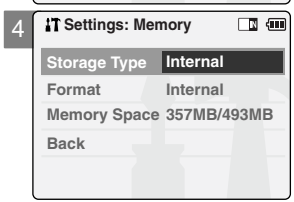
1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**

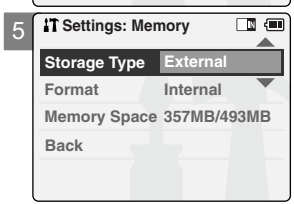


3. **Move the [▲/▼] switch to select <Memory> and press the [OK] button.**
   ◆ If you didn't insert Memory Stick, you cannot select 'External'.



4. **Move the [▲/▼] switch to select <Storage Type> and press the [OK] button.**
5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
   ◆ **Internal**: The video, photo, mp3 file or voice file is stored in internal memory.
   ◆ **External**: The video, photo, mp3 file or voice file is stored in external memory (Memory stick or Memory stick pro).





Notes

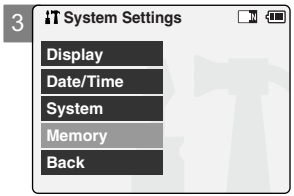
- If you select <Back> in the menu, the previous menu appears.
- 'Internal' is selected by default.
- If you insert the Memory Stick or Memory Stick Pro when the CAM on, the pop-up screen about the memory type selection appears automatically.

Setting the CAM : Setting Memory

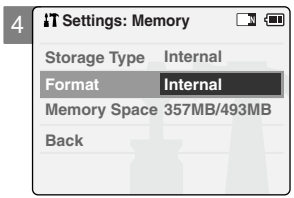
Formatting the Memory

You can format the internal memory, Memory Stick or Memory Stick Pro to erase all files.

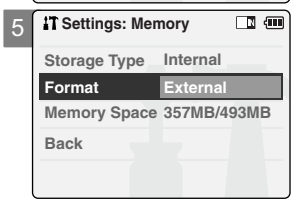
1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <Memory> and press the [OK] button.**



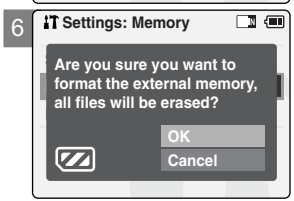
4. **Move the [▲/▼] switch to select <Format> and press the [OK] button.**
   ◆ If you didn't insert Memory Stick, you cannot select 'External'.



5. **Move the [▲/▼] switch to select the desired setting and press the [OK] button.**
   ◆ **Internal**: Format the internal memory. If you select 'Internal', the message is displayed to confirm.
   ◆ **External**: Format the external memory. If you select 'External', the message is displayed to confirm.



6. **Press the [OK] button to format.**
   ◆ Select <Cancel> to cancel formatting.



Note

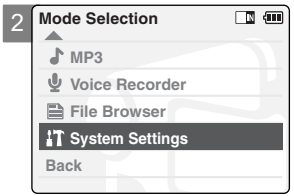
❖ If you select <Back> in the menu, the previous menu appears.

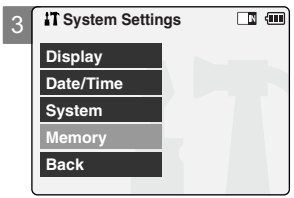
Setting the CAM : Setting Memory

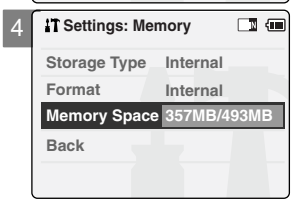
Viewing Memory Space

You can view usable memory and total memory space of the CAM.

1. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
2. **Move the [▲/▼] switch to select *System Settings* and press the [OK] button.**
3. **Move the [▲/▼] switch to select <Memory> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Memory Space>.**
5. **Press the [Back] button to finish setting.**







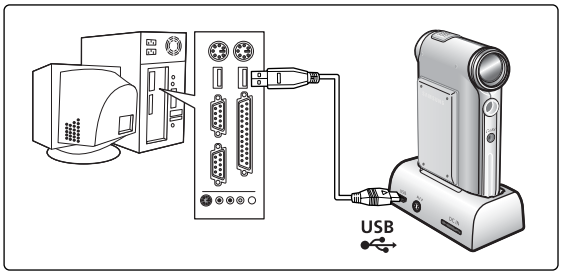
Note

❖ If you select <Back> in the menu, the previous menu appears.

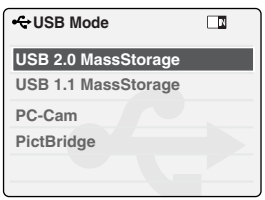
Setting the CAM : Using USB Mode

Storing Files to the External Memory

1. **Connect the CAM to the PC with the USB cable.**



2. **Move [Mode Selector] down to turn on the CAM.**
   - ◆ USB menu screen appears automatically.
3. **Move the [▲/▼] switch to select <USB 2.0 MassStorage> or <USB 1.1 MassStorage> and press the [OK] button.**
   - ◆ Your PC doesn't recognize the USB device automatically. You may install the USB Driver manually on Windows 98SE operating system.
4. **Disconnect the USB cable if you finish storing.**



Notes

- ❖ Select <USB 1.1 MassStorage> when <USB 2.0 MassStorage> does not work depending on your PC environment.
- ❖ If you disconnect the USB cable from the PC or the CAM during the data transfer, the data transfer will stop and the data may be damaged.
- ❖ If you connect the USB cable to a PC using a USB HUB or with other device at the same time, it might cause conflict and may not work properly. If this occurs, remove all other devices and try the connection again.
- ❖ Install the Windows 98SE Driver on Windows 98SE operating system using supplied CD. Refer to page 120 for further details.
- ❖ It takes about 30 minutes if you download or upload the file of 1GB by connecting the USB cable.

Setting the CAM : Using USB Mode

USB Speed depending on the System

Hi Speed USB is not guaranteed except for Microsoft(Windows) or Apple(Mac OS X) or supplied Driver.

- Windows 98SE/ME: Full Speed USB
- Windows 2000: Over Service Pack 4 - Hi Speed USB
- Windows XP: Over Service Pack 1 - Hi Speed USB
- Mac OS X: Over 10.3. - Hi Speed USB

System Environment

	Windows Environment		Macintosh Environment	
	Minimum	Recommended	Minimum	Recommended
CPU	Pentium III, 600MHz	Pentium 4, 2GHz	G3 500MHz	G4 Processor
OS	Windows 98SE/ME	Windows 2000/XP	Mac OS 10.2	Mac OS 10.3
Memory	128MB	512MB or above	128MB	512MB or above
Free space on the hard disk	200MB(For applications only. Apart from this, 1GB or more free space	2GB or above	200MB(For applications only. Apart from this, 1GB or more free space	2GB or above
Display Resolution	800x600 dots 16-bit colour	1024x768 dots 24-bit colour	800x600 dots 16-bit colour	1024x768 dots 24-bit colour
USB	USB 1.1	USB 2.0 High Speed	USB 1.1	USB 2.0 High Speed

Notes

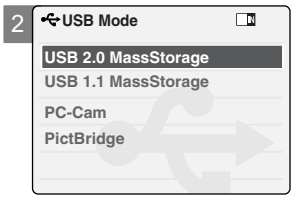
- Not all PCs configured with the above environment are guaranteed to operate properly.
- PCs used via a USB hub or with a USB card are out of the scope of guarantee.
- If your OS is Windows 2000/XP, log in as the [Administrator(administrator of the PC)] (or a user with the equivalent privileges) to install the OS.
- If the capacity of PC is low, the video file may not be played normally or the file is often stopped.
- If the capacity of PC is low, it may take long time to edit the video file.

Setting the CAM : Using USB Mode

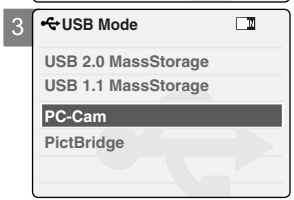
Using PC Cam

You can use this the CAM as a PC camera for video chatting, video conference and other PC camera applications.

1. **Connect the CAM to the PC with the USB cable.**
2. **Move [Mode Selector] down to turn on the CAM.**
   ◆ USB mode screen appears automatically.



3. **Move the [▲/▼] switch to select <PC-Cam> and press the [OK] button.**



Notes

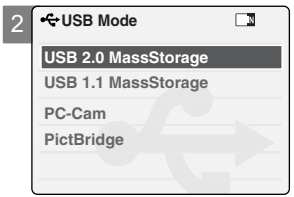
- This function requires the specified USB Streaming Driver and Software to be installed. Refer to page 112 for further details.
- The CAM can be used as a PC Camera for programmes such as Windows Messenger. The use of the PC Cam varies depending on the Software. Refer to the documentation of the respective software products.
- PC-Cam function is operated as 'Full Speed' in the capacity of Windows ME or over.

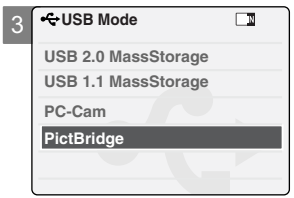
Setting the CAM : Using USB Mode

Connecting the CAM to a Printer

By connecting the CAM to printers with PictBridge support (sold separately), you can send images from the internal memory or external memory (Memory Stick or Memory Stick Pro) directly to the printer with a few simple operations.

1. **Connect the CAM to the printer with PictBridge support with the USB cable.**
2. **Move [Mode Selector] down to turn on the CAM.**
   ◆ USB mode screen appears automatically.
3. **Move the [▲/▼] switch to select <PictBridge> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Date> and press the [OK] button.**
5. **Move the [▲/▼] switch to select <On> or <Off> and press the [OK] button.**
6. **Move the [▲/▼] switch to select <Copies> and press the [OK] button.**
7. **Move the [▲/▼] switch to select desired number and press the [OK] button.**
   ◆ You can select the number of copy from 1 to 99.
8. **Move the [▲/▼] switch to select <Print> and press the [OK] button.**





Notes

- If you select <Back> in the menu, the previous menu appears.
- If you want to select the next or previous photo, select <Next> or <Previous> using [▲/▼] switch.

5 Using the External Camera Module

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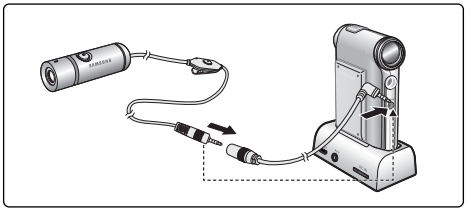
Using the External Camera Module : Connecting the External Camera Module

Connecting the External Camera Module to CAM

1. **Connect the extension cable to the AV Input/Output terminal of the CAM. You can connect the External Camera Module Controller's connector to the AV Input/Output terminal of the CAM.**
2. **Connect the extension cable to the External Camera Module Controller's connector. You may fix the External Camera using Tripod Receptacle or Mounting Band.**



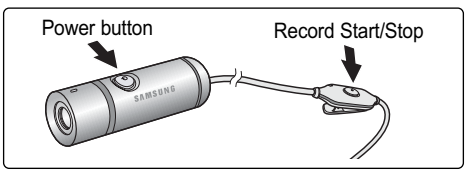
Notes

- When the External Camera Module is connected to AV Input/Output of the Cradle, the Record Strat/Stop button of the External Camera Module does not operate.
- If you set the Hold function with the MP3/External Camera Hold switch, you can't delete, lock or copy music files. You can only use Power switch and volume [+]/[-] buttons.

Recording Video Using the External Camera Module

Using External Camera Module accessory, enjoying sports activity can be directly recorded.
Before using, insert batteries in External Camera Module.

1. **Setup the External Camera in the Video In mode. (See page 39)**
2. **Connect the External Camera Module to the AV Input/Output terminal of the CAM.**
3. **Press the [Power] button on the External Camera Module.**
4. **Press the [Record Start/Stop] button on the External Camera Controller to start recording.**
   - ◆ LED lamp lights in red.
     The elapsed and remaining times are displayed and it starts recording.
5. **Press the [Record Start/Stop] button again to stop recording.**
   - ◆ It stops recording and the CAM is ready again.
6. **Press the [Power] button again to turn off the External Camera Module.**



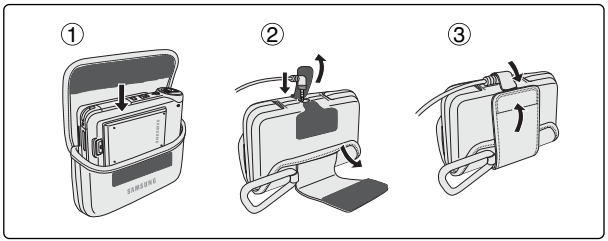
Notes

- When the External Camera Module is connected, [Record/Stop] button of the main set does not operate.
- When recording signal from the External Camera Module, the [Power] button of the External Camera Module does not operate.
- Do not connect the Cradle when the Line Input of the set is in use.

Using the External Camera Module : Wearing the External Camera Module

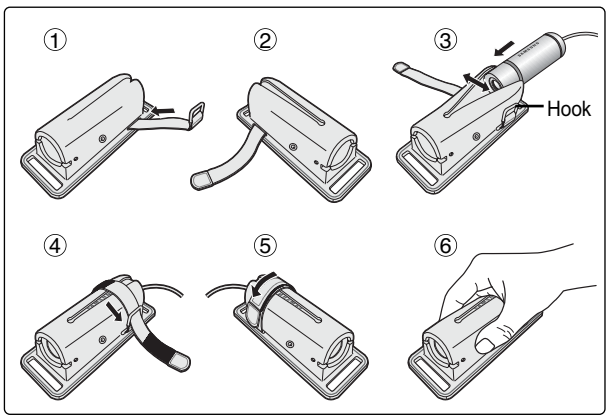
Connecting the extension cable while the set is in the Carrying Case

1. Insert the set into the Carrying Case while its battery faces front side.
2. Open the cable cover strap on the bottom side of the Carrying Case, and plug the extension cable's jack into the AV Input/Output terminal of the set.
3. Fix the extension cable by covering the cable cover strap (non-woven fabric).



Mounting the External Camera Module on Rubber Mount

1. Insert the velcro strap (velcro face down) into the small slot located on the side of the rubber mount.
2. Pull the lead end along the bottom through the opposite slot.
3. Spread the rubber on top of the mount and insert.
4. Run the Velcro Strap through its buckle.
5. Run the lead back under the Rubber mount and fasten the velcro together.
6. When you press the [Power] button to start recording, press ⓒ on side of the Rubber Mount.

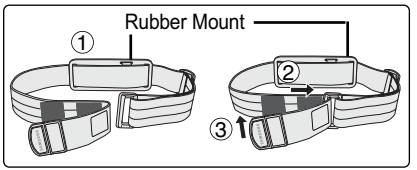


Using the External Camera Module : Wearing the External Camera Module

Using the Short and Long Mount Bands

While the camcorder is inside your bag or backpack, you can attach the External Camera Module mounted on the Rubber Mount to anywhere with help of the Short and Long Mount Bands.

1. **Run the strap of Long Mount Band (or Short Mount Band) through both of the large slots on the rubber mount as illustrated.**
2. **Run the strap through the buckle to adjust the tightness.**
3. **Fasten the strap.**



Notes

- Adjust and shorten the extension cable connected to the External Camera Module to avoid accidental catching of surrounding objects. Otherwise, the extension cable may disconnect or cause an accident.
- Dropping the External Camera Module or bumping it to other objects may cause device failure. When using the device, you must attach it to the rubber mount, and be careful not to drop or strike it.
- A direct contact of the Rubber Mount with your skin for a long period of time may cause skin irritation or allergy. Avoid a long term contact.

6 Miscellaneous Information

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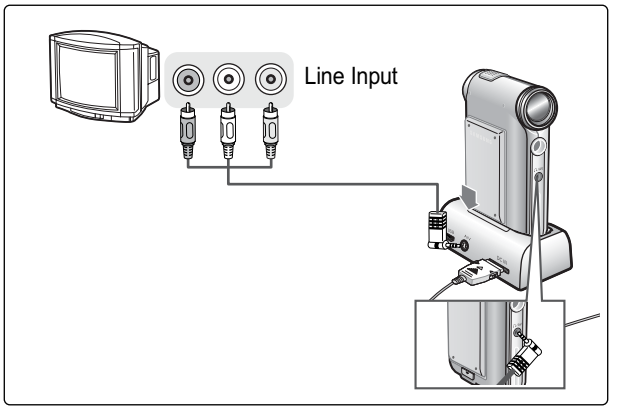
Miscellaneous Information: Connecting the CAM with other Devices

Connecting the CAM to TV

You can connect the CAM to a TV set directly to play video files on TV monitor.

1. **Connect the Audio/Video cable to the AV Output Jack of the CAM or cradle.**
2. **Connect the Audio/Video cable to the external input terminal of your TV set by matching the colours of the terminals.**
3. **Move [Mode Selector] down to turn on the CAM.**
   ◆ The Video Record screen appears.
4. **Press the [Back] button to play the video file in Video Record mode.**
5. **Move [▲/▼] switch to find the video file you want to play.**
6. **Press the [OK] button to play the video file.**



Notes

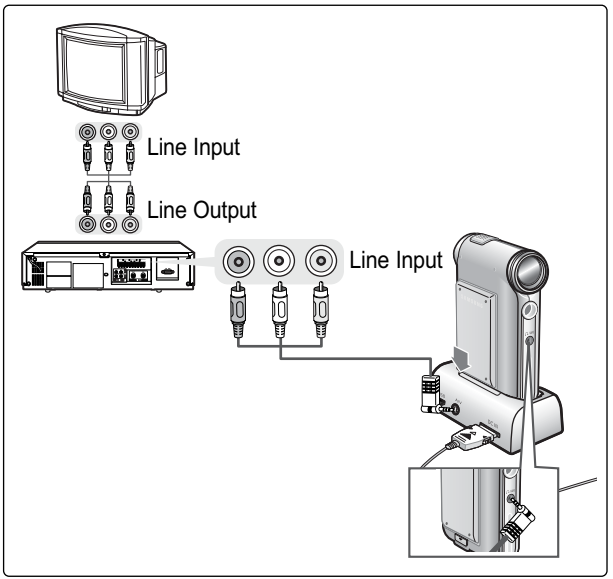
- You can stop and play video files using the same button as used for playing video files on the LCD monitor of the CAM. (pages 40 to 41)
- If you connect a Mono AV cable to the CAM, the video file cannot be played.
- If you connect the AV Jack to the cradle and the CAM simultaneously, AV output signal decreases to 50%. Connect the AV Jack to the only one side.

Miscellaneous Information: Connecting the CAM with other Devices

Connecting the CAM to VCR

You can connect the CAM to VCR to copy the recorded files to the video tape.

1. **Connect the Audio/Video cable to the AV Output Jack of the CAM or cradle.**
2. **Connect the Audio/Video cable to the external input terminal of your VCR set by matching the colours of the terminals.**
3. **Connect the Audio/Video cable to the Video line Output and TV line Input.**
4. **Select the 'Input' on the TV, VCR or the remote control of TV.**



Note

- If TV set has no Line Input, you cannot view the output screen of the CAM.

Miscellaneous Information: Connecting the CAM with other Devices

Copying Video files to a VCR Tape

You can copy your recorded files to a regular blank video tape. Connect the CAM to a VCR using the Audio/Video cable before recording.

1. **Insert the blank video tape to the VCR and select 'Line Input'.**
2. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
3. **Select <Play> in the *Video* mode to find the desired video file with the [▲/▼] switch.**
   (Refer to page 40)
4. **Move the [▲/▼] switch to find the video file you want to copy and press the [OK] button.**
5. **Press the [Record/Stop] button on the VCR to start recording.**

Notes

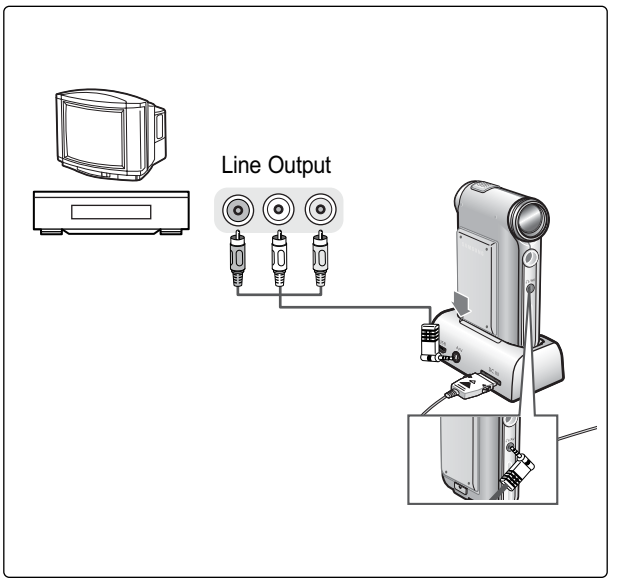
- Refer to operating instructions of your TV or VCR for detailed information on connecting external devices.
- You can stop and play video files using the same button as used for playing video files on the LCD monitor of the CAM. (Refer to page 40)

Miscellaneous Information: Connecting the CAM to other Devices

Recording unscramble contents from other digital devices

You can connect other external digital devices to CAM to record unscrambled contents.

1. **Connect the AV input/output cable to the AV input/output Jack of the CAM or Cradle.**
2. **Connect the Audio/Video cable to the external output terminal of your digital devices (DVD, DVC, etc.) by matching the cable to the colors of the terminals.**
3. **Move [Mode Selector] down to turn on the CAM.**
   ◆ The Video Record screen appears.
4. **Press the [Menu] button and move the [▲/▼] switch. Press the [OK] button after selecting <Video In>.**
5. **Move the [▲/▼] switch to select <Normal> and press the [OK] button.**
6. **Play back the other digital devices.**
7. **Press the [Record/Stop] button to start recording.**
8. **To stop recording, press the [Record/Stop] button again.**



Note

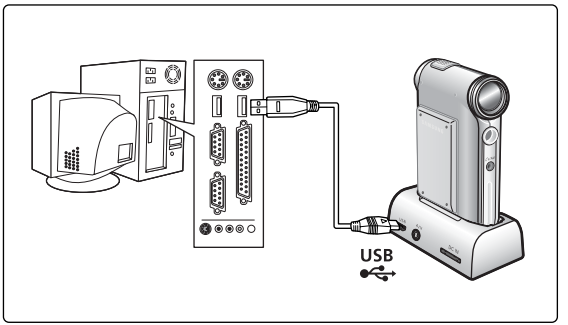
- The quality of an input signal recorded through the Line In input terminal cannot be guaranteed unless it comes from digital devices (DVD, DVC, etc.).

Miscellaneous Information: Connecting the CAM with other Devices

Connecting the CAM to a PC using the USB cable

You can connect the CAM to a PC that supports USB connections.
Use the provided USB cable for connection to a PC.

1. **Insert the cradle into the CAM.**
2. **Connect the provided USB cable to USB port of the cradle.**
3. **Move [Mode Selector] down to turn on the CAM and move it down again.**
   ◆ The Mode Selection screen appears.
4. **Connect the other side of the USB cable to the USB port of your PC.**



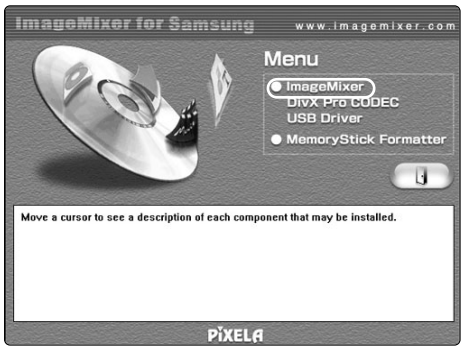
Miscellaneous Information: Installing Programmes

Installing Image Mixer

You can edit the video file with this programme. And you can use the PC Camera function.

Windows

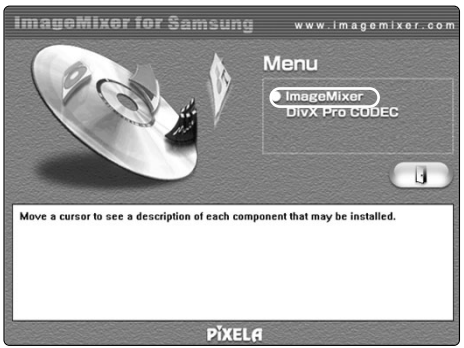
1. **Quit the file and folder you work.**
2. **Insert the programme CD into the CD-ROM drive.**
   - ◆ The Setup screen appears automatically.
   - ◆ Open the CD-ROM Drive in 'My Computer' and double-click <Iminst.exe>.
3. **Click <ImageMixer>**
4. **Select the language.**
5. **Follow the steps appeared on the monitor.**
   - ◆ You can use the Image Mixer after restarting your PC.



Miscellaneous Information: Installing Programmes

Macintosh

1. **Quit the file and folder you work.**
2. **Insert the programme CD into the CD-ROM drive.**
   - ◆ The Setup screen appears automatically.
   - ◆ If not, double-click the CD-ROM icon on the Desktop, and double-click <Iminstall>.
3. **Click <ImageMixer>.**
4. **Select the language.**
5. **Follow the steps appeared on the monitor.**
   - ◆ You can use ImageMixer after restarting your PC.



Notes

- ❖ If Image Mixer appears to not be installed, re-install it again but you should first attempt to uninstall it. Uninstalling 'Image Mixer' should be done via the 'Control Panel' on your PC.
- ❖ If you play the MPEG4 video file, the ratio of the screen may not match due to the pixel.
- ❖ If you click "ImageMixer", all softwares in the programme CD are installed automatically.
- ❖ It is necessary to install ImageMixer for playback the CAM recorded video files on your PC.

Miscellaneous Information: Installing Programmes

Installing for using PC-Cam

Windows

1. **Insert the programme CD into the CD-ROM drive.**
2. **Fix the CAM into the cradle and connect it to a PC with the USB cable.**
3. **Locate the G:\PC_CAM\ folder on the CD.**
4. **Follow the steps on the monitor.**
   ◆ If the message of Windows Logo Test to confirm compatibility appears, press 'Next'.

Miscellaneous Information: Installing Programmes

Installing Windows98SE Driver (For Windows98SE only)

To use the CAM as a removable drive on Windows98SE, you may need to install the Windows98SE Driver.

1. **Insert the programme CD into the CD-ROM drive.**
2. **Fix the CAM into the cradle and connect it to a PC with the USB cable. The PC recognises the CAM and 'Found New Hardware Wizard' appears.**
3. **Locate the G:\Storage folder on the CD.**
4. **Follow the steps on the monitor.**

Add New Hardware Wizard
This wizard searches for new drivers for:
Unknown Device
A device driver is a software program that makes a hardware device work.
< Back
Next >
Cancel

Miscellaneous Information: Connecting the CAM with other Devices

Disconnecting USB Connection

After completing the data transfer, you must disconnect the cable in the following way.

1. Select the removable disk icon and click the right mouse button to select 'Safely Remove Hardware'.
2. Select 'Stop' and disconnect the USB cable when the pop-up screen disappears.

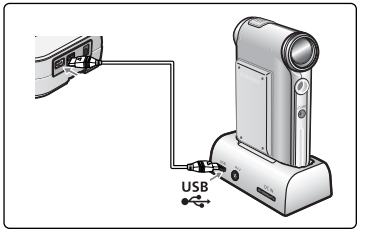
Notes

- If you disconnect the USB cable from the PC or the CAM during the data transfer, the data transfer will stop and the data may be damaged.
- If you connect the USB cable to a PC using a USB HUB or with other device at the same time, it might cause conflict and may not work properly. If this occurs, remove all other devices and try the connection again.
- The CAM may operates abnormally in the recommended system environment depending on the assembling of PC. For example, the video file is played abnormally.
- Once you select the USB 2.0 MassStorage, USB 1.1 MassStorage, PC-Cam or PictBridge, you cannot select the modes. Disconnect the USB cable or turn on the CAM again to select the modes.
- If you disconnect the USB cable, the message 'Now refresh file list' appears for 1 second.
- All operation mentioned on the page 104 may not guaranteed in the system environment.

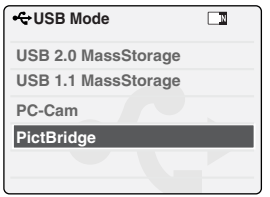
Miscellaneous Information: Printing Photos

Printing with PictBridge Function

With the PictBridge Support, you can control the printer directly through the CAM in order to print out stored pictures.
For direct printing of your stored pictures using the PictBridge function, you must connect the CAM to a PictBridge printer using a USB cable.



1. **Connect the CAM to the PictBridge printer with the USB cable.**
2. **Move [Mode Selector] down to turn on the CAM.**
   ◆ USB menu screen appears automatically.
3. **Move the [▲/▼] switch to select <PictBridge> and press the [OK] button.**
4. **Move the [▲/▼] switch to select <Copies> and press the [OK] button.**
5. **Move the [▲/▼] switch to select desired number and press the [OK] button.**
   ◆ You can select the number of copies from 1 to 99.
6. **Move the [▲/▼] switch to select <Print> and press the [OK] button.**



Notes

- If you select <Back> in the menu, the previous menu appears.
- If you want to select the next or previous photo, select <Next> or <Previous> using [▲/▼] switch.
- For further details about printing photos, refer to the User's manual of the printer.

Miscellaneous Information: Printing Photos

Printing Photos with DPOF Files

DPOF (Digital Printing Order Format) defines the print information for the specific photos and number of each photo on the Memory Stick or Memory Stick Pro. You can easily make prints on a DPOF compatible printer or order copies.

Printing DPOF files of the Memory Stick

1. Set the print information for the photo you want to print. (Refer to page 61)
2. Insert the Memory Stick into the photo printer.
3. Follow the steps of the printer to print out photos.

Note

- For further details about printing photos, refer to the User's manual of the printer.

Maintenance : Cleaning and Maintaining the CAM

After using the CAM

- **For the safekeeping of the CAM, follow these steps.**
  - ✓ Turn the CAM off.
  - ✓ Remove the Battery Pack (refer to page 20).
  - ✓ Remove the Memory Stick (refer to page 34).
- **To prevent any damage to the LCD monitor, do not apply excessive force on its moving parts.**
- **Do not drop or in anyway shock the CAM.**
- **For prolonged use of the CAM, avoid using it in places subject to excessive humidity or dust.**
- **Do not leave the CAM in places subject to:**
  - ✓ Excessive humidity, steam, soot or dust.
  - ✓ Excessive shock or vibration.
  - ✓ Extremely high (over 50°C or 122°F) or extremely low (under 0°C or 32°F) temperatures.
  - ✓ Strong electromagnetic fields.
  - ✓ Direct sunlight or in a closed car on a hot day.
- **For the safe use of the battery pack, follow these.**
  - ✓ To conserve battery power, be sure to turn off the CAM power when not in use.
  - ✓ Battery consumption may vary depending on the condition of use. Recording with many starts and stops, frequent zooming, and recording in low temperatures will shorten actual recording times.
  - ✓ Dispose of used battery packs promptly. Do not dispose of them in fire.
  - ✓ The battery pack will become warm during charging and use. This is not a malfunction.
  - ✓ The battery pack has a limited service life. If the period of use becomes noticeably shorter with a normal charge, the battery pack is at the end of its service life. Replace it with a new battery pack.
- **For the safe use of the Memory Stick and the Memory Stick Pro, follow these.**
  - ✓ The Memory Stick should be stored away from heaters and other heat sources. Avoid storing Memory Sticks under direct sunlight and avoid electromagnetic fields.
  - ✓ Do not power off any devices while transferring data, as this may destroy the data.
  - ✓ Back up your image data often to a hard disk or other permanent storage media.
  - ✓ Format the Memory Stick periodically.
  - ✓ When formatting the Memory Stick or Memory Stick Pro, format in the CAM. If you format it on PC, use the 'Memory Stick Formatter' in the supplied software CD.

Maintenance : Cleaning and Maintaining the CAM

Cleaning the Body

- **To Clean the Exterior of the CAM**
  - ✓ To clean the exterior, use a soft dry cloth. Wipe the body gently.
    Do not apply excessive force when cleaning, gently rub the surface.
  - ✓ The LCD monitor surface should not be pressed. Use a soft dry cloth to clean the surface.
  - ✓ To clean the lens, use an optional air blower to blow out dirt and other small objects. Do not wipe the lens with cloth or your fingers. If necessary, use lens cleaning paper.
  - ✓ Do not use thinner, alcohol or benzene for cleaning. Otherwise, the finish may be damaged.
  - ✓ Cleaning should be done only after the battery pack has been removed, and other power sources have been disconnected.

Note

- If the lens look dimmer, turn off the CAM and leave it for about 1 hour.

Using the Built-in Rechargeable Battery

The CAM incorporates a rechargeable lithium cell that maintains the date and other settings even when the AC adaptor and the battery are removed. The rechargeable lithium cell is automatically recharged when the CAM is used.

Charging the Built-in Rechargeable Battery

- If The CAM is not used at all, the cell runs down in 5 days. In this case, connect the AC adaptor to the CAM and turn on the power switch. Then leave it for 24 hours.
  After that, set the date and other settings again.

Maintenance : Cleaning and Maintaining the CAM

Regarding the Battery

- Battery pack performance decreases when the surrounding temperature is 10°C (50°F) or below, and shortens the battery life. In that case, do one of the following so that the durability of the battery life can be extended for a longer period of time.
  - Put the battery pack in a pocket to warm it up, and insert it in your Sports Camcorder immediately prior to use.
  - Use a large capacity battery pack (Optional).
- Be sure to set the switch to OFF when not recording or playing back. The battery power is also consumed in standby mode and play back pause.
- Have your battery packs ready for two or three times the expected recording time, and make trial recordings before make the actual recording.
- Do not expose the battery pack to water.
  The battery pack is not water resistant.
- Keep the battery out of reach of children. If it is swallowed, seek medical assistance immediately.
- Wipe the battery with a clean dry cloth to ensure proper contact.
- Do not pick up the battery using metal tools as this may cause a short circuit.
- Do not short the battery or dispose of the battery in fire. Do not disassemble the battery. The battery could explode or catch fire.
- Use only recommended batteries and accessories. Use of batteries not expressly recommended for this equipment may cause an explosion or leakage, resulting in fire, injury or damage to the surroundings.
- Install the battery according to the instructions. Improperly installed batteries can cause damage to the camcorder.
- When you do not use for a long time, remove the battery pack and batteries.
  Otherwise, the battery may leak. To avoid damage to the product, be sure to remove the battery when no charge remains.
- Remove the batteries from the external lens during extended periods of non-use. To prevent damage to the remote lens, immediately remove spent or expired batteries from the external lens as they may breakdown or leak.
- Change the batteries if the lamp of external camera doesn't turn on or blinks when you powered.
- Never use new batteries together with batteries that have been used in other devices.

Maintenance : Cleaning and Maintaining the CAM

Using the CAM Abroad

- Each country or region has its own electric and colour systems.
- Before using the CAM abroad, check the following items:

Power Sources

- You can use the CAM in any country or area with the supplied AC Power Adapter where the power input range is 100V ~ 240V, 50/60Hz.
- Use a commercially available AC plug adapter if necessary, depending on the design of the local wall outlets.

Colour System

- You can view your video files using the built-in LCD monitor.
  However, to view your recordings on a television set or to copy it to a video cassette recorder (VCR), the television set or the VCR must comply with PAL-compatible and have the appropriate Audio / Video ports. Otherwise, you may need to use a separate Video Format Transcoder (PAL-NTSC format Converter).

PAL-Compatible Countries / Regions
Australia, Austria, Belgium, Bulgaria, China, CIS, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Great Britain, Holland, Hong Kong, Hungary, India, Iran, Iraq, Kuwait, Libya, Malaysia, Mauritius, Norway, Romania, Saudi Arabia, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Syria, Thailand, Tunisia, etc.

NTSC-Compatible Countries / Regions
Bahamas, Canada, Central America, Japan, Mexico, Philippines, Korea, Taiwan, United States of America, etc.

Troubleshooting

Self Diagnosis Display

Display	Informs that…	Action
Not enough free space	Not enough free space for saving files	Check the space of internal memory or the Memory Stick.
Corrupted file	The file is corrupted	Delete the corrupted file.
Paper error	The paper is insufficient.	Check the paper in the printer. If there is no paper, insert the paper.
Printer error	The paper is caught in the printer.	Check that paper is caught in the printer. Pull out the caught paper.
Ink error	Ink is low.	Check if the ink or toner is low.
Wrong error	The file is wrong.	Check that the file is JPEG.
USB transfer error	The error is occurred while transferring data.	Disconnect the USB cable and connect it again.
Low battery	Battery is low.	Charge the battery pack or connect the AC Adapter.
Holding the key	The hold key is locked.	Unlock the hold key and operate the CAM.
Card error	The memory card is corrupted.	Format the Memory Stick or replace it with new one.
Not formatted	Format the memory card.	Format the Memory Stick.
Write error	Failed to write.	Check the memory space or format the memory.
Read error	Failed to read.	Delete the file.
Not supported format	The format is not supported.	The AVI or JPEG file that is not supported. Check the supported file on the page 30.
Write protected	Memory Stick is protected to write.	Unlock the Memory Stick.
MPEG decoding error	The video file is corrupted.	Delete the corrupted file.

❖ If these instructions do not solve your problem, contact your nearest Samsung dealer or authorized service centre/personnel.

Symptom	Possible Causes	Measure
No power is supplied	The power is not connected properly The battery is dead The battery is too cold	Connect the AC adapter properly, page 24 Replace the dead battery pack Warm up the battery or move to warmer place
Date/Time is wrong	The Date/Time is not set	Set the Date/Time, pages 90~91
Focus does not adjust automatically	Focus is set to manual mode Recording was done in a dark place Lens is covered with condensation	Set focus to AUTO Use strobe or lit the place Clear the lens and check the focus
The Memory Stick will not load properly	Memory stick is in wrong position Something fills in the Memory Stick slot	Insert the Memory Stick properly, page 34 Clear the Memory Stick slot

Troubleshooting

Symptom	Possible Causes	Measure
Colour balance of picture is not natural	White balance adjustment is required	Set proper white balance, page 67
Digital zoom does not work	Digital special effect is applied	Turn off the digital special effects, page 54
Files stored in the Memory Stick cannot be deleted	Memory Stick is protected File is locked	Remove the protection tab of Memory Stick Remove the lock on the file, page 84
Images on the LCD monitor appear dark	Ambient is too bright Ambient temperature is too low	Adjust the brightness and angle of LCD Low temperatures might produce a dark LCD display This is not a malfunction
Rear of the LCD monitor is hot	Prolonged use of LCD monitor	Close the LCD monitor to turn if off, or turn your device off to cool down
Play, rewind and fast forwarding do not work	The Photo Mode is selected	Select 'Video Mode' and select 'Play'
Memory Stick cannot be played back (Photo mode)	The Video Mode is selected	Select 'Photo Mode' and select 'View'
No picture is taken when is fully pressed	Not enough free memory space is remained Memory card is formatted by different devices	Delete files from the Memory Stick Format the Memory Stick on the CAM
Built-in Light will fire	Light is forced to cancel Light is not available for recording	Select different Light mode, page 64
Cannot Record a video	The 'Photo Mode' is selected	Select 'Video Mode'
LCD screen turns off	To save power consumption, the LCD screen and Camera's power turns off if there is no button operation for a certain period of time (depending on operation mode), which is not a malfunctioning	Operating any button will turn the camera on Pressing the button once again will operate its function
External Camera Module does not operate	Battery is exhausted	Battery Replacement

Using the Menu

Video

- 1. Record
- 2. Video In
  - External Camera
  - Normal
- 3. Play
- 4. File Options
  - Delete
    - Selected
    - All
    - Cancel
  - Lock
    - Selected
    - All
    - Cancel
  - Copy To
    - Selected
    - All
    - Cancel
  - PB Option
    - Selected
    - All
    - Cancel
  - Back
- 5. Settings
  - Size
    - 720
    - 352
  - Quality
    - Super Fine
    - Fine
    - Normal
  - Focus
    - AF
    - MF
  - EIS
    - On
    - Off
  - White Balance
    - Auto
    - Hold
    - Outdoor
    - Indoor
  - Program AE
    - Auto
    - Sports
    - Spotlight
    - Sand/Snow
    - HS Shutter
  - BLC
    - Off
    - On
  - Effect
    - Off
    - Art
    - Mosaic
    - Sepia
    - Negative
    - Mirror
    - B&W
    - Emboss
  - Digital Zoom
    - Off
    - On
  - Back
- 5. Back

Photo

- 1. Capture
- 2. View
- 3. File Options
  - Delete
    - Selected
    - All
    - Cancel
  - Lock
    - Selected
    - All
    - Cancel
  - Copy To
    - Selected
    - All
    - Cancel
  - DPOF
  - Back
- 4. Settings
  - Size
    - 800X600
    - 640X480
  - Light
    - Auto
    - On
    - Off
  - Focus
    - AF
    - MF
  - EIS
    - On
    - Off
  - White Balance
    - Auto
    - Hold
    - Outdoor
    - Indoor
  - Program AE
    - Auto
    - Sports
    - Spotlight
    - Sand/Snow
    - HS Shutter
  - BLC
    - Off
    - On
  - Back
- 5. Back

MP3

- 1. Play Options
  - Repeat
    - All
    - Off
    - One
  - Back
- 2. File Options
  - Delete
    - Selected
    - All
    - Cancel
  - Lock
    - Selected
    - All
    - Cancel
  - Copy To
    - Selected
    - All
    - Cancel
  - Back
- 3. Back

Using the Menu

Voice Recorder

- 1. Record
- 2. Play
- 3. File Options
  - Delete
    - Selected
    - All
    - Cancel
  - Lock
    - Selected
    - All
    - Cancel
  - Copy To
    - Selected
    - All
    - Cancel
  - Back
- 4. Back

File Browser

- 1. Delete
  - Selected
  - All
  - Cancel
- 2. Lock
  - Selected
  - All
  - Cancel
- 3. Copy To
  - Selected
  - All
  - Cancel
- 4. File Info
  - Close
- 5. Back

System Settings

- 1. Display
  - LCD Brightness
    - 0%
    - ⋮
    - 100%
  - LCD Colour
    - 0%
    - ⋮
    - 100%
  - Back
- 2. Date/Time
  - Set Time
  - Set Date
  - Date Format
    - YY/MM/DD
    - DD/MM/YY
    - MM/DD/YY
  - Time Format
    - 12 Hour
    - 24 Hour
  - Back
- 3. System
  - Auto Shut off
    - Off
    - 5 Minutes
  - Demo
    - Off
    - 5 Minutes
    - Play Now
  - Start-up
    - Video Mode
    - Previous Mode
  - File No.
    - Series
    - Reset
  - Beep Sound
    - On
    - Off
  - Version Info
    - Close
  - Back
- 4. Memory
  - Storage Type
    - Internal
    - External
  - Format
    - Internal
    - External
  - Memory Space
    - 000MB/000MB
  - Back
- 5. Back

USB Mode

- 1. USB 2.0 MassStorage
- 2. USB 1.1 MassStorage
- 3. PC-Cam
- 4. PictBridge
  - Date/Copies/Print
  - Next Photo/
  - Previous Photo/
  - Back

Specifications

Model Name	VP-X105L/X110L
the CAM System	
Video Recording System	MPEG4 AVI Format
Photo System	JPEG (DPOF, Exif 2.2)
MP3	Stereo Playing
Voice	WAVE file record/play (8KHz Sampling, 16 bit, Stereo)
Memory	Internal memory/Memory Stick/Memory Stick Pro
Recording/Playing time	Refer to page 30
CCD Pixel	1/6 inch CCD, 800K(Maximum)
Zoom Ratio	x10(Optical), x100(Digital)
Focal Length	f=2.4~24mm, F1.8~2.4
Minimum Illumination	3.0 Lux
LCD Monitor	2.0” Trans Reflective, 210K
Cradle Connectors	
USB	Mini-B type (USB 2.0 High Speed)
The CAM Connector	Special 22Pin Connector
AV Input/Output	Video (1.0Vp_p), Audio (-7.5dBm 47KΩ, Input:mono/Output:stereo)
DC Power In Connector	Special 22Pin Connector
General	
Operating Temperature	0°C~40°C
Operating Humidity	10%~80%
Power Source	3.8V (Li-Polymer Battery pack), 4.8V (AC Adapter)
Power Consumption	3.0W (LCD ON)
Dimension(WxHxD)	58.8mm x 92.7mm x 26.3mm
Weight	150g (Including the Lithium Polymer Battery Pack)
Built-in Microphone	Omni-directional Stereo condenser microphone

Specifications

Model Name		VP-X105L/X110L
The CAM Connectors		
Common connector	Earphone	Ø 3.5 Stereo
	AV output	Video (1.0p_p, 75Ω), Audio (-7.5dBm 47KΩ, Stereo)
Cradle Connector		Special 22Pin Connector
DC Power In Connector		Special 22Pin Connector
AC Adapter		
Power Requirement		AC 100~240V, 50/60Hz
DC Output		DC 4.8V, 1.0A
Dimensions		70mm x 30mm x 42mm
Weight		80g (Including DC cable)

Model Name	XC-L1P (External Camera Module)
the External CMOS Camera	
CMOS Pixel	1/4 inch CMOS, 320K(Maximum)
Video Resolution	640x480 (VGA)
Exposure	Auto
White Balance	Auto
Focus Type	Fixed
Focal Length	f=4.0mm, F2.6
Connector	
AV Output	Video (1.0Vp_p), Audio (-7.5dBm 47KΩ, Mono)
General	
Operating Temperature	0°C~40°C (32°F~104°F)
Operating Humidity	20%~80%
Power Source	1.5V x 2 (Alkaline AAA Battery)
Power Consumption	0.9W
Dimension(LxHxD)	85mm x 27mm x 26mm
Weight	105g (Without the Alkaline AAA Battery)
Built-in Microphone	Omni-directional condenser microphone
Battery Using Time	Alkaline Battery : Maximum 60minutes
	Nickel Hydrogen Rechargeable Battery : Maximum 100 minutes (not included)

These technical specifications and design may be changed without notice.

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Power Sources (United Kingdom Only)

The plug used on this product is a unitary transformer plug and is designed specifically for this camcorder it must never be replaced or removed with any other type of plug.

UNITED KINGDOM

REPUBLIC OF IRELAND

This Samsung product is warranted for the period of twelve (12) months from the original date of purchase, against defective materials and workmanship. In the event that warranty service is required, you should return the product to the retailer from whom it was purchased.
However, Samsung Authorised Dealers and Authorised Service Centres in other EC Countries will comply with the warranty on the terms issued to purchasers in the country concerned. In case of difficulty, details of our Authorised Service Centres are available from:

Samsung Electronics (U.K.) Ltd.,
Euro Service Centre, Stafford Park 12,
TELFORD, Shropshire TF3 3BJ,
Tel: 0870) 242 0303, Fax: 01952) 297617

■ WARRANTY CONDITIONS

1. The warranty is only valid if, when warranty service is required, the warranty card is fully and properly completed and is presented with the original invoice or sales slip or confirmation, and the serial number on the product has not been defaced.
2. Samsung's obligations are limited to the repair or, at its discretion, replacement of the product or the defective part.
3. Warranty repairs must be carried out by Authorised Samsung Dealers or Authorised Service Centres. No re-imbursement will be made for repairs carried out by non Samsung Dealers and, any such repair work and damage to the products caused by such repair work will not be covered by this warranty.
4. This product is not considered to be defective in materials nor workmanship by reason that it requires adaptation in order to conform to national or local technical or safety standards in force in any Country other than the one for which the product was originally designed and manufactured. This warranty will not cover, and no re-imbursement will be made for such adaptation nor any damage which may result.
5. This warranty covers none of the following:
   a) Periodic check ups, maintenance and repair or replacement of parts due to normal wear and tear.
   b) Cost relating to transport, removal or installation of the product.
   c) Misuse, including the faiure to use this product for its normal purposes or incorrect installation.
   d) Damage caused by Lightning, Water, Fire, Acts of God, War, Public Disturbances, incorrect mains voltage, improper ventilation or any other cause beyond the control of Samsung.
6. This warranty is valid for any person who legally acquired possession of the product during the warranty period.
7. The consumers statutory rights in any applicable national legislation whether against the retailer arising from the purchase contract or otherwise are not affected by this warranty. Unless there is national legislation to the contrary, the rights under this warranty are the consumers sole rights and Samsung, its subsidiaries and distributors shall not be liable for indirect or consequential loss or any damage to records, compact discs, videos or audio taper or any other related equipment or material.

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145 68 Κρυονέρι, Απικής

Τηλ. 210.629.3100

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   * Λυχνίες φούρνων μικροκυμάτων
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